

# Tisha Mendiola Jessop

Teaching Professor Department of Chemistry and Biochemistry, UCCS

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## PROFESSIONAL SUMMARY

Collaborative educator with talent for engaging students and creating supportive STEM identity spaces. Driven by a commitment to individual and collective academic excellence and systems-thinking education to make the most meaningful impact as a professor.

## EDUCATION

### University of Colorado Colorado Springs

Colorado Springs, CO  
May 2023

### Master of Science, Chemistry

Thesis: *Integrating Green and Sustainable Principles into Introductory and General Chemistry Laboratory Curriculum*

### Colorado College

Colorado Springs, CO  
May 2010

### Master of Art, Teaching

Thesis: *Picture of the Day – Investigating Student Motivation with Visuals and Pictures*

### University of Colorado Colorado Springs

Colorado Springs, CO  
May 2009

### Bachelor of Art, Chemistry and Biology

## PROFESSIONAL EXPERIENCE

### University of Colorado Colorado Springs

Colorado Springs, CO  
Jan 2015 - Present

### Chemistry Lecture Instructor

- Courses: *General Chemistry 1, Introduction to Chemistry 1 (GOB)*
- Collaborated with University and department instructors and professors to ensure an alignment of course standards and expectations. Communicated with students the courses' standards and expectations regarding content, assessments, participation, and other college best practices. Used Blackboard/Canvas LMS, email, and text messaging to clarify concepts and provide support during the preparation of lab notebooks and interpretation of results during the post lab.
- Developed General Chemistry 1 lecture content from both Open Educational Materials (OER) and Silberberg and Amentis digital text using McGraw-Hill's ALEKS learning tool. Utilized Universal Design for Learning within LMS design and lecture materials/delivery. Used relationship-building activities like student-designed name tents, peer-to-peer conversations (e.g., get-to-know-you and Think-Pair-Share), and cooperative problem sets to improve student engagement and participation
- Delivered lecture content using a partially-flipped model, provided in-class practice and collaboration, maintained presence by walking around the room of ~80 students. Practice problems were provided in both written packets and as homework in the ALEKS systems. Traditional summative assessments were used – unit exams and ACS final. Developed a "points recovery" system to support student learning and help improve exam grades. Students were allowed to complete missed exam questions for half-credit. On a hand-written document, they had to show incorrect response, new work, new answer, and a brief explanation for the reason the original question was incorrect and why the new answer was correct.

### University of Colorado Colorado Springs

Colorado Springs, CO  
Jan 2015 - Present

### Chemistry Lab Instructor

- Courses: *General Chemistry 2 for Majors, General Chemistry 1 and 2, Organic Chemistry 1 and 2, Organic Chemistry 2 for Majors*
- Collaborated with course instructors and professors to ensure an alignment of course standards and expectations. Communicated with students the courses' standards and expectations regarding safety, grading, lab procedures, and other college best practices. Used Blackboard/Canvas LMS, email, and text messaging to clarify concepts and provide support during the preparation of lab notebooks and interpretation of results during the post lab. Prepared brief lecture material for upcoming labs. Monitored and instructed students during the lab period; ensured overall safety in the lab itself.
- Lead instructor for the General Chemistry Lab 2 for Majors. Redesigned course to meet Compass Curriculum: Writing Intensive Course expectations. Project ACAC section of including topics on synthesis, purification, and characterization techniques for organo-metallic complexes. Individual lab reports, presentations (digital posters), and ACS-style lab report were used assessments. Writing processes included writing process and ACS style-guide training, peer review, revisions of final lab report.

**University of Colorado  
Colorado Springs**  
Colorado Springs, CO  
Jan 2015 - Present

### **Environmental Science Lecture and Lab Instructor (Online Format, Spring 2025)**

- Course: *Introduction to Environmental Science*
- Collaborated with University and department instructors and professors to ensure an alignment of course standards and expectations. Communicated with students the courses' standards and expectations regarding content, assessments, participation, and other college best practices for online courses. Used email and Canvas to summarize daily lecture concepts, provide reminders for assessments (homework, quizzes, or exams) and provide support for common student challenges, errors, or questions
- Developed Environmental Science content from both Open Educational Materials (OER) and digital text using McGraw-Hill's Connect learning tool. Designed the course as a weekly topic course aligned with textbook chapters plus additional readings for updates to content. Supplementary material for topics covering green and sustainable chemistry, UN sustainable development goals, greenwashing, environmental justice, indigenous knowledge practices, and current national and global policy developments were also provided for more comprehensive introduction to Environmental Stewardship and Justice concepts.
- Developed assessment activities as assessment tools to strengthen student application of the learned material. Activities included weekly video discussions and responses, "In the News" discussions to relate topics to a recent news article, "Tell a Story" to communicate environmental science to younger or non-science audiences, and a circular economies research project.

**University of Colorado  
Colorado Springs**  
Colorado Springs, CO  
May 2020 – Aug 2025

### **General Chemistry Lab Curriculum Coordinator**

- Courses: *General Chemistry 2 for Majors, General Chemistry 1 and 2*
- Coordinated and managed 6 - 10 General Chemistry labs, up to 7 faculty and 6 graduate TAs
- Responded to emerging pandemic effects on content-delivery by modifying safety protocols to meet local and federal guidelines and developing content to continue to provide in person lab experiences. Coordinated with Science Interactive to develop a kit-delivered experience for off-sequence labs during pandemic.
- Developed and updated prelab lecture videos and postlab Excel and calculation guides.
- Coordinated with Green Chemistry Curriculum coordinator to analyze practices and waste production of each lab. Labs were redesigned to meet Green Chemistry Principles 1 (reduced waste) and 12 (inherently safer chemicals for accident prevention). Designed green chemistry research projects for students to explore principles to fulfill ACS accreditation guidelines for successful graduates
- Designed and implemented OER lab manuals that included updated prelab background information with green and sustainable principles, updated prelab quizzes and postlab analysis, post-lab applications, mid-semester surveys, and science-communication presentation projects.

**University of Colorado  
Colorado Springs**  
Colorado Springs, CO  
Jan 2016 - Present

### **Freshmen Gateway Program Seminar (GPS) Instructor**

- Developed two courses for incoming traditional-aged, college freshmen: *Healthcare and Social Justice* and *GPS Pathways: Healthcare*
- Collaborated with course instructors and professors to ensure an alignment of course standards and expectations.
- Communicated the courses' standards and expectations regarding college best practices, Healthcare field, writing and presentation skills, and other GPS expectations.
- Coordinated with instructors and departments on Campus to bring in various guest speakers and on-campus field trips for relevant content presentations.
- Communicated with students before, during, and after lab via Blackboard/Canvas, email, and text messaging to clarify concepts and provide support during the preparation of lab notebooks and interpretation of results during the post lab.

**Colorado Springs  
School District 11,  
Night School**  
Colorado Springs, CO  
Jan 2015 - 2016

### **Gradpoint Teacher**

- Monitored and advised students completing courses in Gradpoint.
- Collaborated with Springs Community Night School colleagues, District 11 curriculum coordinators, and other Gradpoint teachers to align curriculum and design lesson plans that met Colorado State standards. Curriculum and lessons were modified for delivery to at-risk alternative education students and further differentiated to meet the learning needs of individual students including those with Special Education Plans or Individual Learning Plans.

**Colorado Springs  
School District 11,  
Night School**  
Colorado Springs, CO  
Jan 2005 - 2016

### **Science Teacher (Secondary Education)**

- Designed and implemented creative and Colorado State Standards-based lesson plans to fit 2.5 hour instructional periods for a diverse population of traditional and at-risk students. Science classes included Chemistry, Geology, Biology, Environmental Science, Astronomy, and Forensic Science.
- Collaborated with Springs Community Night School Science colleagues, District 11 curriculum coordinators, and other science teachers to align curriculum and design lesson plans that met Colorado State Science standards. Curriculum and lessons were modified for delivery to at-risk alternative education students and further differentiated to meet the learning needs of individual students including those with Special Education Plans or Individual Learning Plans.
- Incorporated activities to support multiple learning-styles for each lesson. Utilized direct instruction with PowerPoint, engagement activities including a picture of the day and brain teaser puzzles, internet simulation labs through CU-Boulder's PhET interactive simulations. Traditional labs including Iodine Clock Reaction, Chemical Models, and Forensic Crime Scene evidence processing.

**University of Colorado  
Colorado Springs**  
Colorado Springs, CO  
Jan 2005 – May 2015

- Utilized performance assessments including presentations, video production, and laboratory practical exams and traditional assessments including multiple choice/matching/short answer tests or written research/reaction papers. Online assessment tools, such as EASY, are also used for summative evaluations of student performance.
- Collaborated with the other alternative school science teachers at the Roy J. Wasson Academic campus to build a science community tasked and developing successful work relationships between schools. The Roy J. Wasson Academic Campus Science community has worked to delegate responsibilities of care and maintenance of shared Science areas. I coordinated Lab Safety and Chemical Storage Room organization.
- Additional Duties: Computer Applications Class designed to introduce students to basic computer functions, Microsoft Office applications, Internet Searching and Security, Google Documents, website construction, blogging, and wiki use. Computer Application students organized, filmed, and produced video Public Service Announcements using Microsoft MovieMaker. Health curriculum designed to engage students in topics of hygiene, disease, biology, sociology, psychology, and interpersonal relationships
- Integrated technology to enhance student learning. Direct instruction utilized PowerPoint, students designed presentations using PowerPoint and Microsoft Moviemaker, many labs were internet simulations from PhET, and students used online wikis or blog sites to discuss topics in class. Students are also expected to be able to search for information on their phones, utilize their phones for survey questions, and display responsible technology usage at all times.

#### **Lab Teacher Assistant:**

- Courses: *General Chemistry, 2008, 2012-2015; Introduction to Chemistry 2014; General Biology, 2007-2008; Organic Chemistry, 2005-2007, 2009*
- Collaborated with course instructors and professors to ensure an alignment of course standards and expectations. Communicated with students the courses' standards and expectations regarding safety, grading, lab procedures, and other college best practices.
- Coordinated and scheduled workshops and instruction modules with the UCCS library and Writing Center to support the writing efforts of General Chemistry for Majors lab students.
- Delivered lectures for the Project ACAC section of the General Chemistry for Majors including topics on synthesis, purification, and characterization techniques. Prepared brief lecture material for upcoming labs.
- Assisted in the instruction of first semester Chemistry and Biology lab courses and second semester Organic Chemistry courses.
- Monitored and instructed students during the lab period; ensured overall safety in the lab itself.
- Communicated with students before, during, and after lab via Blackboard, email, and text messaging to clarify concepts and provide support during the preparation of lab notebooks and interpretation of results during the post lab.
- Graded reports and entered grades into Blackboard system and final grades into Excel spreadsheets.

## **PROFESSIONAL EXPERIENCE**

**Colorado Springs  
School District 11,  
Event Services**  
Colorado Springs, CO  
2006 - 2018

#### **Event Site Supervisor/Technical Support**

- Monitored and maintained various D-11 auditoriums during events including dance recitals, large group rentals, and High School performances. Controlled the crowd and interacted with patrons
- Operated the computer-controlled light board, sound board, SFX software for audio files, CD player, and spotlight.

**RadioShack**  
Colorado Springs, CO  
Jan 2001 – June 2012

#### **Sales Associate/Store Manager**

- Possessed knowledge about the fundamentals of electronics, components, devices, mobile technology, audio/visual equipment and connectors, telecommunications, and toys
- Served and sold to customers to meet or exceed sales goals
- Fielded and resolved customer concerns or complaints
- Worked actively with district and store managers, and team members to increase store sales and profitability

## **Conferences and Presentations**

- **ACS Green Chemistry and Engineering Conference, Summer 2025**
- **American Chemical Society Conference, Spring 2025**
  - "Empowering students as changemakers: using labs, projects, open educational resources, and the UN Sustainable Development goals in foundational chemistry courses to deliver equity-focused green and sustainable chemistry lab curriculum"
- **Science on Tap, Fall 2024**
  - "Green Chemistry at UCCS"
- **American Chemical Society Conference, Fall 2024**
  - "Increasing student equity and engagement through green chemistry projects"

- "Integrating GSC and SDG in OER lab manual for GOB"
- **IUPAC Global Women's and Allies Breakfast, Spring 2024**
  - "Catalyzing diversity in science"
- **National Science Teaching Association National Conference, Spring 2024**
  - "Empowering tomorrow's scientists: scientific communication using MS Sway and Canva infographics"
  - "Chemistry and social justice: application of student learning through variety of presentation modes"
- **BIPOC Educational STEM Thinkers (BEST) Conference, Summer 2023**
- **ACS Green Chemistry and Engineering Conference, Summer 2023**
- **COACS November Meeting, Fall 2022**
  - "Transforming first year labs"
- **Green Chemistry Connections, Webinar, Fall 2022**
  - "Transforming first-year chemistry labs with green and sustainable chemistry"
- **Colorado OER Conference, Summer 2022**
  - "OER success stories - tips, tricks, and takeaways for creating an OER"
- **UCCS Teaching and Learning Conference, Summer 2022**
  - "Curating and creating open educational resources (OER): an interactive showcase of faculty-generated OER"
- **Virtual Lab Summit - Hosted by Macmillan Learning/Hayden-McNeil, Fall 2021**
  - "Transforming first-year chemistry labs through green and sustainable chemistry"

## VOLUNTEER AND COMMITTEES

**University of Colorado  
Colorado Springs**  
Colorado Springs, CO  
May 2020 – Current

### **Department of Chemistry and Biochemistry Committee on Student Belonging and Achievement**

- Served as a working committee member to create resources for students and faculty
- Resources included: scholarship, faculty training for inclusive and responsive practice, resources for students to navigate support networks for chemists and biochemists that are offered by national organizations like the ACS, our university, our campus, and our department
- Created website materials for resource navigation
- Created a resource promotional flyer with information about chemistry majors, UCCS, and the Chemistry and Biochemistry department for distribution within and outside the department

**University of Colorado  
Colorado Springs**  
Colorado Springs, CO  
Jan 2016 – May 2024

### **Faculty Assembly's Women's Committee**

- Advisory Member from 2016-2017, 2022-2024
- Incoming Chair 2017-2018
- Co-Chair 2018-2019

**Cool Science**  
Colorado Springs, CO  
October 2024

### **Co-Lead Teacher for Department STEM Outreach**

- Designed and supervised service-learning project for students in the Lessons in Chemistry GPS course at UCCS Fall 2024.
- Students practiced, coordinated, and supported chemistry demos for elementary-aged children and their guardians. Debriefed and evaluated the experience with the students – including that there are no “small” jobs in organizing a large event, all work is essential to making the experience valuable.

**D20 Lincoln  
Elementary**  
Colorado Springs, CO  
April 2016

### **Co-Lead Teacher for Department STEM Outreach Team**

- Designed chemistry and biology activities for approximately 40 elementary (Grade 5) children with a focus on observations, reporting, DNA testing, and modelling

**Cheyenne Mountain  
Zoo**  
Colorado Springs, CO  
June – July 2011

### **Volunteer Keeper, Education Loft**

- Preparation of animal diets and basic husbandry duties
- Greet and inform patrons visiting the Loft. Actively engaging guests, especially children, in daily animal keeping activities, including feeding the animals.

**Catamount Institute**  
Colorado Springs, CO  
Jan 2016 – May 2024

### **Outdoor STEM Education Teacher Assistant**

- Designed a two-day activity schedule for approximately 10 transitioning elementary-aged children with a focus on outdoor education activities.