

Liane Marie Stevens

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EDUCATION

2015. Ph.D., Geosciences, Department of Geosciences, University of Montana, Missoula. Advisor: Julia A. Baldwin. Dissertation: *Pressure-Temperature-Time Constraints on Metamorphism, Anatexis, and Exhumation in the Priest River Metamorphic Core Complex, Northern Idaho, and Comparison with Geodynamic Models.*
2002. M.S., Geology, Department of Geosciences, University of Massachusetts Amherst. Advisor: Michael L. Williams. Thesis: *Petrology of Mafic Granulite Xenoliths Across the Cheyenne Belt, Colorado and Wyoming: Implications for the Nature of the Lower Crust.*
1997. B.A. with Honors in Geology, Wellesley College, Wellesley, Massachusetts. Advisor: Margaret D. Thompson. Thesis: *The Westboro Formation, Saugus, MA: Petrography and Detrital Zircon Geochronology.*

EXPERIENCE

Current Position:

2016-present. Assistant Professor, Department of Geology, Stephen F. Austin State University, Nacogdoches, Texas.

Lecturing:

- 2015-2016. Visiting Assistant Professor, Department of Earth Sciences, Montana State University, Bozeman.
2014. Adjunct Instructor, Department of Geosciences, University of Montana, Missoula.
2010. Teaching Assistant (Course Instructor), Department of Geosciences, University of Montana, Missoula.
- 2005-2009. Lecturer of Geosciences, Department of Natural & Applied Sciences, Bentley University, Waltham, Massachusetts.
- 2002-2005. Adjunct Assistant Professor, Geology, Department of Natural Sciences, Bentley College, Waltham, Massachusetts.

Research Assistantships:

- 2010-2014. Project: *Metamorphic core complexes in context: incorporating gravitational collapse into the orogenic cycle.* Supervisor: Julie Baldwin, Department of Geosciences, University of Montana.
- 1999-2001. Projects: *In-situ monazite geochronology via the electron microprobe; Petrology of crustal xenoliths from the southwestern U.S.A.* Supervisor: Mike Williams, Department of Geosciences, University of Massachusetts Amherst.
- 1997-1998. Project: *Virtual field trip development for Dynamic Digital Atlas of New England.* Supervisor: Chris Condit, Department of Geosciences, University of Massachusetts Amherst.
- Summer 1996. Project: *Reconnaissance fieldwork in and around the Boston Basin; Zircon preparation for U-Pb geochronology, MIT Thermal Ionization Mass Spectrometer Laboratory.* Supervisor: Meg Thompson, Department of Geology, Wellesley College.

Teaching Assistantships:

- 2013-2015. Teaching Assistant (Grader, Laboratory Instructor), Dept. of Geosciences, University of Montana.
- 2009-2010. Teaching Assistant (Laboratory Instructor), Dept. of Geosciences, University of Montana.

Spring 2001. Head Teaching Assistant, Physical Geology Laboratories, Department of Earth and Environment, Mount Holyoke College, South Hadley, Massachusetts.

1998-1999. Teaching Assistant (Laboratory Coordinator), Introductory Geology, Department of Geosciences, University of Massachusetts Amherst.

1998-1999. Teaching Assistant (Laboratory Instructor), Introductory Geology, Department of Geosciences, University of Massachusetts Amherst.

COURSES TAUGHT

Stephen F. Austin State University (through Spring 2023):

- **Fundamentals of Earth Science**, GEOL1301/GOL 101, 3 credits, lecture (4 semesters, 4 sections, 101 students)
- **Fundamentals of Earth Science**, GEOL 1301/1001, 3 cr., online lecture/lab (2 semesters, 2 sections, 55 students)
- **Introductory Geology**, GEOL 1303/GOL 131, 3 credits, lecture (5 semesters, 7 sections, 355 students)
- **Introductory Geology**, GOL 131, 4 credits, lecture & field lab (with TA) (1 semester, 1 section, 18 students)
- **Mineralogy**, GEOL 2341/GOL 241, 3 credits, lecture & lab (with TA) (4 semesters, 4 sections, 45 students)
- **Petrology**, GOL 242, 3 credits, lecture & lab, co-taught (with TA) (4 semesters, 4 sections, 54 students)
- **Igneous and Metamorphic Petrology**, GEOL 2342, 3 credits, lecture & lab (with TA) (3 semesters, 3 sections, 21 students)
- **Structural Geology**, GEOL 3338, 3 credits, lecture & lab (with/without TA) (2 semesters, 2 sections, 23 students)
- **Field Geology**, GOL 364, 6 credits, field course, co-taught (1 semester, 1 section, 14 students)
- **Fundamentals of Plate Tectonics**, GOL 430, lecture (3 semesters, 3 sections, 28 students)
- **Optical Mineralogy**, GOL 443, 3 credits, lecture & lab (with TA) (5 semesters, 5 sections, 53 students)
- **Geoanalytical Methods**, GOL 444, 3 credits, lecture (1 semester, 1 section, 3 students)
- **Geochronology**, GEOL 4345/GOL 445, 3 credits, lecture (2 semesters, 2 sections, 8 students)
- **Local Field Trip**, GOL 471, 1 credit, one-day trip (with TA) (1 semester, 1 section, 20 students)
- **Arkansas Field Trip**, GOL 471, 2 credits, four-day trip (with TAs) (3 semesters, 3 sections, 30 students)
- **Arkansas (Virtual) Field Trip**, GEOL 4171, 2 credits, virtual field trip (3 semesters, 3 sections, 48 students)
- **Hill Country Field Trip**, GOL 471, 2 credits, four-day trip (with TAs) (3 semesters, 3 sections, 39 students)
- **Special Topics**, GOL 475, 1 credit, undergraduate research (2 semesters, 2 sections, 2 students)
- **Metamorphic Basement Geology**, GOL 540, 3 credits, graduate lecture (3 semesters, 3 sections, 20 students)
- **Geochronology**, GEOL 5345/GOL 545, 3 credits, graduate lecture (3 semesters, 3 sections, 21 students)
- **Geoanalytical Methods**, GOL 544, 3 credits, graduate lecture (1 semester, 1 section, 5 students)
- **Thesis Research**, GOL 589, 3 credits, graduate (1 semester, 1 section, 1 student)
- **Thesis Writing**, GOL 590, 3 credits, graduate (2 semesters, 2 sections, 1 student)

Previous positions:

- **Introduction to Physical Geology**, GEO 101N, 3 credits, lecture, University of Montana (2 semesters, 2 sections, 194 students)
- **Principles of Geology**, NASC 130/GEO 230, 4 credits, lecture & lab, Bentley University (14 semesters, 28 sections, 627 students)
- **Earth Materials**, GEO 208, 3 credits, lecture & lab (with TA), Montana State University (1 semester, 1 section, 45 students)
- **Earth Materials**, GEO 225, 4 credits, lecture & lab (with TA), University of Montana (1 semester, 1 section, 35 students)
- **Mineralogy & Optical Mineralogy**, GEO 302, 4 credits, lecture & lab (with TA), Montana State University (1 semester, 1 section, 25 students)
- **Maps & Mapping**, NASE 331, 3 credits, lecture & lab, Bentley University (1 semester, 1 section, 20 students)
- **Environmental Geology**, NASE 332/GEO 332, 3 credits, lecture & lab, Bentley University (7 semesters, 7 sections, 116 students)
- **Geology of Cape Cod**, NASE 334/NS 334, 3 credits, five-day intensive field course on location in Wellfleet, Massachusetts, Bentley University (3 semesters, 3 sections, 44 students)
- **Oceanography**, NASE335/NS378, 3 credits, lecture & lab, Bentley University (2 semesters, 2 sections, 42 students)
- **Interdisciplinary Internship**, ID 421, advisor, Bentley University (1 semester, 1 section, 1 student)
- **Metamorphic Petrology**, GEO 449, 3 credits, lecture & lab, Montana State University (1 semester, 1 section, 30 students)
- **Igneous Petrology**, GEO 450, 3 credits, lecture & lab, Montana State University (1 semester, 1 section, 21 students)

Teaching Assistantships:

- Introduction to Physical Geology, lab, University of Montana (1 semester)
- Introduction to Physical Geology, grader, University of Montana (2 semesters)
- Earth Materials/Rocks, Minerals & Resources, lab, University of Montana (2 semesters)
- Physical Geology Laboratories, head TA, Mount Holyoke College (1 semester)
- Introductory Geology, laboratory coordinator, University of Massachusetts Amherst (2 semesters)
- Introductory Geology, lab, University of Massachusetts Amherst (3 semesters)

GRADUATE ADVISING

Campos, Marykathryn, M.S., 2020- . Thesis: Petrologic and Geochemical Analysis of Volcanic and Volcaniclastic Units and Associated Dikes in the Knight Range, Grant County, New Mexico. (*In progress.*)

Flaming, Peter, M.S., 2017. Thesis: *P-T* history of the Packsaddle Schist, Sandy Creek, Llano Uplift, Texas. (*Discontinued.*)

Galle, Travis, M.S., 2018-2020. Thesis: Petrology of the Gradational Intrusive Contact Between the Packsaddle Schist and the Town Mountain Granite, Enchanted Rock State Natural Area, Llano Uplift, Central Texas. (*Completed.*)

McLemore, Tyler, M.S., 2019-2021. Project: Geochemical Variation Within the Packsaddle Schist and the Town Mountain Granite, Enchanted Rock State Natural Area, Llano Uplift, Texas. (*Discontinued.*)

Vike, Haylee, M.S., 2023- . Thesis: Establishing Petrologic Context for the Timing of Metamorphism, Anatexis, and Deformation in the Llano Uplift, Central Texas. (*In progress.*)

Yarbrough, Joshua, M.S., 2018-2019. Project: Structural and petrographic analysis of Cretaceous-Tertiary dikes in the Knight's Peak area, Silver City, New Mexico. (*Discontinued.*)

THESIS COMMITTEE MEMBER

Angelloz, Jensen K., 2017, Structural Analysis of the Northwest Wind Mountain Quadrangle, New Mexico: Proterozoic Shearing to Cenozoic Brittle Faulting in the Burro Mountains [Geology M.S. thesis].

Askelson, Kaitlin L., 2017, Basement and Cover Structural Analysis Along the Eagle River Gorge, Sawatch Range, Colorado [Geology M.S. thesis].

Galle, Travis, 2020, Petrology of the Gradational Intrusive Contact Between the Packsaddle Schist and the Town Mountain Granite, Enchanted Rock State Natural Area, Llano Uplift, Central Texas [Geology M.S. thesis].

Shields, Jessica, 2018, Speleogenetic Evolution and Geological Remote Sensing of the Gypsum Plain, Eddy County, New Mexico [Geology M.S. thesis].

Tonner, David, 2022, Geochemical Element Characterization of the Delaware Basin of West Texas Using Chemostratigraphy and Integrated Petrophysics [Geology M.S. thesis].

Williams, Victoria, *in progress*, Identifying Soil Brine Contamination within the Smackover Oil Field in Arkansas using Multispectral Digital Imagery [Environmental Science M.S. thesis].

HONORS

2022. Teaching Excellence Award, Stephen F. Austin State University

2020-2022. Department of Geology nominee, Teaching Excellence Award, Stephen F. Austin State University

2013. Bertha Morton Scholarship, The Graduate Council, University of Montana (\$3000) (Dept. of Geosciences nominee 2010, 2011, 2013)

2011. Golden Key International Honour Society, inductee, University of Montana

2010. 2010 Tobacco Root Geological Society Scholarship (\$500)

2010. Phi Kappa Phi, inductee, University of Montana

2009. Alumni Scholarship, Department of Geosciences, University of Montana (\$1500)

1999. Outstanding Teaching Assistant, Department of Geosciences, University of Massachusetts Amherst

1997. Graduation with Honors in Geology, Wellesley College

1997. Sigma Xi, induction as associate member, Wellesley College

1996. Sherman Fairchild Foundation award for summer research, Wellesley College
1994. First Year Distinction, Wellesley College

GRANTS

2023. SFA Travel Support Minigrant, South-Central Geological Society of America 2023 (\$750)
2023. SFA Research Pilot Study, Establishing Petrologic Context for the Timing of Metamorphism in the Llano Uplift, Central Texas (\$2938.29)
2021. Comprehensive Research Fund Equipment Request, Acquisition of a Research-Grade Petrographic Microscope for the Department of Geology, not funded.
2020. Zeiss-GSA Research Grant, A Microstructural History of Metamorphism and Anorogenic Intrusion within the Packsaddle Schist-Town Mountain Granite Gradational Intrusive Contact at Enchanted Rock, Llano Uplift, Central Texas, not funded.
2013. GSA Graduate Student Research Grant (\$1875)

PEER-REVIEWED PUBLICATIONS

Cooke, M., Breitbart, M., Cooperdock, E., Levin, N., Niemi, N., Bell, C., **Stevens**, L., and Viskupic, K., 2021, First-year graduate courses foster inclusion: Nature Geoscience (correspondence), <https://doi.org/10.1038/241561-021-00800-6>.

Stevens, L.M., Bendick, R., and Baldwin, J.A., 2017, Synconvergent exhumation of metamorphic core complexes in the northern North American Cordillera: *Geology*, v. 45, no. 6, p. 495-498.

Stevens, L. M., Baldwin, J. A., Crowley, J. L., Fisher, C. M., and Vervoort, J. D., 2016, Magmatism as a response to exhumation of the Priest River complex, northern Idaho: constraints from zircon U-Pb geochronology and Hf isotopes: *Lithos*, v. 262, p. 285-297.

Stevens, L. M., Baldwin, J. A., Cottle, J. M., and Kylander-Clark, A. R. C., 2015, Phase equilibria modeling and LASS monazite petrochronology: *P-T-t* constraints on the evolution of the Priest River core complex, northern Idaho: *Journal of Metamorphic Geology*, v. 33, p. 381-411.

Farmer, G. L., Bowring, S. A., Williams, M. L., Christensen, N. I., Matzel, J., and **Stevens**, L. M., 2004, Contrasting lower crustal evolution across an Archean-Proterozoic suture: Physical, chemical, and geochronologic studies of lower crustal xenoliths in southern Wyoming and northern Colorado, *in* Karlstrom, K. E., and Keller, R. G., eds., *The Rocky Mountain Region: An Evolving Lithosphere*, AGU Monograph 154.

CD-ROM Working Group, 2002, Structure and evolution of the lithosphere beneath the Rocky Mountains: Initial results from the CD-ROM experiment: *GSA Today*, v. 12, no. 3, p. 4-10.

OTHER PUBLICATIONS

Stevens, L. M., 2008, Introduction to Google Earth [*course activity, reviewed*]. *NAGT On the Cutting Edge* Introductory Course Activity: <http://serc.carleton.edu/NAGTWorkshops/intro/activities/23760.html>.

Stevens, L. M., 2008, Silicate Structures: Chalkboard Demo [*course activity, reviewed*]. *NAGT On the Cutting Edge* Introductory Course Activity: <http://serc.carleton.edu/NAGTWorkshops/intro/activities/24296.html>.

CONFERENCE PRESENTATIONS

*Student author

*Campos, M., **Stevens**, L., 2023, Petrography and hXRF geochemistry of volcanic and volcanoclastic units and associated dikes in the Knight Range, Grant County, southwestern New Mexico: *Geological Society of America Abstracts with Programs*, v. 55, no. 1.

Stevens, L.M., 2023, Contextualizing geochronometers via thin section scans in order to constrain the timing of metamorphism and deformation during the Grenville orogeny, Llano uplift, central Texas: *Geological Society of America Abstracts with Programs*, v. 55, no. 1.

- *Campos, M., **Stevens**, L., 2022, Petrologic and geochemical analysis of dikes intruding volcanic deposits at Knight Peak and Walking X Peak, Grant County, New Mexico: Geological Society of America Abstracts with Programs, v. 54, no. 1.
- Stevens**, L., 2022, Walk-through videos: using Flipgrid for formative assessment with geology majors: Geological Society of America Abstracts with Programs, v. 54, no. 1.
- *Vike, H., **Stevens**, L., 2022, Comparison of analytical methods for hXRF geochemistry of the Packsaddle Schist and Town Mountain Granite, Llano uplift, Texas: Geological Society of America Abstracts with Programs, v. 54, no. 1.
- Stevens**, L., *Galle, T.S., 2021, Microstructural contrast across the intrusive contact between the Packsaddle Schist and the Town Mountain Granite, Llano uplift, Texas: Geological Society of America Abstracts with Programs, v. 53, no. 3.
- *Wagner, E., **Stevens**, L., 2021, HXRF analysis of metamorphic xenoliths and bulk compositional comparison with metamorphic units in the Llano uplift, Texas: Geological Society of America Abstracts with Programs, v. 53, no. 3.
- Cooke, M.L., Breitbart, M., Cooperdock, E., Levin, N.E., Marshall, A.M.S., Niemi, N.A., **Stevens**, L.M., 2020, Making the hidden curriculum transparent through 1st year courses for Geosciences graduate students: Geological Society of America Abstracts with Programs, v. 52, no. 6.
- *Galle, T.S., **Stevens**, L.M., 2020, Petrology of the gradational intrusive contact between the Packsaddle Schist and Town Mountain Granite, Enchanted Rock State Natural Area, Llano uplift, central Texas: Geological Society of America Abstracts with Programs, v. 52, no. 1.
- Stevens**, L.M., 2020, Chemical variation in Town Mountain Granite and assimilation of Packsaddle Domain xenoliths analyzed by hXRF, "The Slab" swimming hole, Llano uplift, Kingsland, Texas: Geological Society of America Abstracts with Programs, v. 52, no. 1.
- Faulkner, M.G., **Stevens**, L.M., 2020, Increasing student engagement through field-based learning – an update; Geological Society of America Abstracts with Programs, v. 52, no. 1.
- ***Galle**, T., **Stevens**, L., 2020, The gradational nature of the intrusive contact between Packsaddle schist and Town Mountain granite, Enchanted Rock, Llano uplift, central Texas: Texas Academy of Science.
- Stevens**, L.M., 2020, Compositional variation across contacts between Packsaddle Domain xenoliths and the Town Mountain Granite analyzed by hXRF, Llano uplift, central Texas: Texas Academy of Science.
- Stevens**, L.M., *McLemore, T.S., 2019, A field-based structural and hXRF study of the origin and assimilation of Packsaddle Domain xenoliths in the Town Mountain Granite, "The Slab" swimming hole, Llano uplift, Kingsland, Texas: Geological Society of America Abstracts with Programs, v. 51, no. 5.
- Baldwin, J.A., Vervoort, J.D., Dwyer, N., **Stevens**, L.M., 2019, Core complex metamorphism and exhumation in the northern U.S. North American Cordillera: Geological Society of America Abstracts with Programs, v. 51, no. 5.
- Stevens**, L.M., Faulkner, M., 2019, Increasing student engagement and recruitment through modification and adaptation of traditional service field trips: Geological Society of America Abstracts with Programs.
- Stevens**, L.M., 2018, Investigating the *P-T* history of the Packsaddle domain, Llano Uplift, via phase equilibria modeling, Geological Society of America Abstracts with Programs, v. 50, no. 1.
- Stevens**, L.M., Bendick, R., Baldwin, J.A., 2015, Synconvergent exhumation of continental metamorphic core complexes in the northern North American Cordillera: Geological Society of America Abstracts with Programs, v. 47, no. 7, p. 674.
- Stevens**, L.M., Baldwin, J.A., Crowley, J.L., 2014, Constraints on extension and exhumation of the Priest River complex, northern Idaho, from zircon U-Pb geochronology: Geological Society of America Abstracts with Programs, v. 46, no. 6, p. 175.
- Stevens**, L.M., Baldwin, J.A., Crowley, J.L., Fisher, C. M., 2014, Zircon U-Pb geochronology and Hf isotopic constraints on the nature of crustal melt generation in the Priest River complex, northern Idaho: Geological Society of America Abstracts with Programs, v. 46, no. 5, p. 5.

- Stevens**, L.M., Baldwin, J.A., 2013, Phase equilibria, garnet REE geochemistry, and LASS petrochronology: constraints on the *P-T-t* history of the Priest River complex, northern Idaho: Geological Society of America Abstracts with Programs, v. 45, no. 7, p. 880.
- Stevens**, L.M., Baldwin, J.A., Cottle, J., Hacker, B.R., 2012, Phase equilibria and laser ablation split-stream (LASS) petrochronology of metapelites in the Priest River metamorphic core complex, northern Idaho [*poster*]: Geological Society of America Abstracts with Programs, v. 44, no. 7, p. 586.
- Baldwin, J.A., Guevara, V.E., **Stevens**, L.M., Cottle, J., Hacker, B.R., 2012, Deciphering multiple metamorphic events by laser ablation split-stream (LASS) petrochronology of monazite and xenotime in the Clearwater complex, northern Idaho: Geological Society of America Abstracts with Programs, v. 44, no. 7, p. 525.
- Stevens**, L.M., 2008, Enhanced reality: Linking the campus field trip and the virtual field trip in an inquiry-based Google Earth project for non-science majors [*poster*]: Geological Society of America Abstracts with Programs, v. 40, no. 2, p. 10.
- Stevens**, L.M., Williams, M.L., Bowring, S.A., Matzel, J.P., Farmer, G.L., 2001, Constraints on the nature of the lower crust across the Cheyenne Belt: Petrologic evidence from lower crustal xenoliths: GSA Abstracts with Programs, v. 33, no. 5, p. A-4.
- Williams, Michael L., Karlstrom, Karl E., Jercinovic, Michael J., and **Stevens**, Liane, 2001, Microprobe monazite geochronology from the Manzano Mountains, New Mexico: Distinguishing stages in a long-lived and reactivated orogen: GSA Abstracts with Programs, v. 33, no. 5, p. A-50.
- Stevens**, L.M., Williams, M.L., Bowring, S.A., Matzel, J.P., Farmer, G.L., 2000, Petrology of lower crustal xenoliths across the Cheyenne Belt: Implications for evolution and seismic imaging of the lower crust: GSA Abstracts with Programs, v. 32, no. 7, p. A-386.
- Matzel, J., Bowring, S., **Stevens**, L., Williams, M.L., Farmer, G.L., 2000, U-Pb geochronology of lower crustal xenoliths from across the Cheyenne Belt, S. Wyoming and N. Colorado: GSA Abstracts with Programs, v. 32, no. 7, p. A-387.
- Farmer, G.L., Lester, A., Bowring, S., Matzel, J., **Stevens**, L., Williams, M.L., 2000, Composition of the lower continental crust beneath the Cheyenne Belt, S. Wyoming and N. Colorado: Geochemical and isotopic evidence from mafic xenoliths: GSA Abstracts with Programs, v. 32, no. 7, p. A-386.
- Farmer, G. L., Lester, A., Christensen, N., Bowring, S., Matzel, J., **Stevens**, L., and Williams, M. L., 1999, Geochemical and geophysical studies of mid- to lower crustal xenoliths in support of the Continental Dynamics of Rocky Mountains (CD-ROM) experiment: Eos (Transactions, Supplement, American Geophysical Union), v. 80, no. 46, p. F641.
- Stevens**, L. M., Thompson, M.D., Davidek, K. L., and Bowring, S. A., 1997, Detrital zircon geochronology of Neoproterozoic Westboro Quartzite, Saugus, Massachusetts [*poster*]: Geological Society of America Abstracts with Programs, v. 29, no. 1, p. A-82.

INVITED PRESENTATIONS

- Stevens**, L. M., 2021, Demystifying the Hidden Curriculum to Foster Inclusion, Kentucky – AIPG 2021 Diversity Equity & Inclusion Series (Zoom).
- Stevens**, L. M., 2021, Walk-Through Videos: Flipgrid for Formative Assessment, 2021 Teaching Showcase, Center for Teaching & Learning, Stephen F. Austin State University.
- Stevens**, L. M., 2016, Constraining the *P-T-t* history of the Priest River complex, northern Idaho: Implications for the development of metamorphic core complexes. Dept. of Geology, Stephen F. Austin State University.
- Stevens**, L. M., 2015, Investigating exhumation triggers in the Priest River complex, northern Idaho: melting, magmatism, and multiple U-Pb geochronologic methods. Dept. of Geosciences, University of Akron.
- Stevens**, L. M., 2015, Time will tell: geochronologic constraints on the development of the Priest River metamorphic core complex, northern Idaho. Geology Department, Juniata College.
- Stevens**, L. M., 2013, Phase equilibria & petrochronology: constraining the metamorphic history of the Priest River core complex, northern Idaho. Department of Geosciences Colloquium, University of Montana.

LABORATORY EXPERIENCE

Modeling:

- Phase equilibria (pseudosection) modeling via THERMOCALC and Theriak-Domino

Zircon & Monazite Geochronology & Trace Element Geochemistry:

- Mineral (zircon, monazite) separation, sample preparation – Boise State University, Massachusetts Institute of Technology, UC Santa Barbara, University of Montana, Washington State University
- Chemical abrasion-thermal ionization mass spectrometry (CA-TIMS), zircon, U-Pb geochronology – Boise State University
- Laser ablation-inductively coupled plasma mass spectrometry (LA-ICPMS), zircon, U-Pb geochronology and trace element geochemistry – Boise State University
- Laser-ablation split-stream inductively coupled plasma mass spectrometry (LASS-ICPMS); monazite, U/Th-Pb geochronology and REE geochemistry – UC Santa Barbara
- Laser-ablation multi-collector inductively coupled plasma mass spectrometry (LA-MC-ICPMS); zircon, U-Pb geochronology and Hf isotope data – Washington State University
- Isotope-dilution thermal ionization mass spectrometry (ID-TIMS), zircon, U-Pb geochronology – Massachusetts Institute of Technology

Rock & Mineral Chemistry, Sample Characterization:

- Handheld X-ray fluorescence (hXRF), whole rock geochemistry – Stephen F. Austin State University
- LA-ICPMS, garnet, trace element geochemistry – Washington State University
- X-ray fluorescence (XRF), whole rock geochemistry – Washington State University
- Scanning electron microscopy (SEM) and electron-dispersive X-ray spectroscopy (EDS), thin section chemistry, backscattered electron (BSE) and cathodoluminescence (CL) imaging – University of Montana
- Electron probe microanalysis (EPMA): BSE imaging, qualitative X-ray mapping, major element mineral chemistry, U-Th- total Pb monazite geochronology – University of Massachusetts Amherst, Washington State University
- Bulk sample preparation – University of Montana, Washington State University
- Thin section preparation – University of Massachusetts Amherst, University of Montana, Wellesley College
- Petrographic (polarized light) microscopy and photomicrography

FIELD EXPERIENCE

Field Research:

- Field research, Knight Range, Grant County, New Mexico: mapping, sample collection, structural measurements, graduate advising
- Field research, Llano uplift: metamorphism and intrusive relationships between the Packsaddle Domain and the Town Mountain Granite; traditional fieldwork and handheld XRF geoanalysis (2017-)
- Dissertation fieldwork, Priest River complex: reconnaissance, sample collection, structural measurements (2010-2013)
- Field-intensive graduate coursework in Metamorphic Structural Geology (1998) – field techniques in multiply-deformed terranes, western Massachusetts; Advanced Field Geology (1997)
- Summer 1996. Thesis (B.A.) fieldwork, Boston Basin and vicinity, Massachusetts
- January 1996. Massachusetts Institute of Technology Field Camp, Las Vegas, Nevada. Paleozoic geology of the Bird Spring Range, Basin and Range. Field techniques; map and cross-section preparation.

Leader, Course-Related Field Experiences:

- Field Geology (2018). Summer field camp travels through Texas, New Mexico, Arizona, and Utah. Emphasis on field reconnaissance, mapping, stratigraphy, and field methods and analysis. Co-taught.
- Field trip courses: Arkansas Field Trip (2016-2019); Hill Country Field Trip (2017-2019); Local Field Trip, Nacogdoches, Texas (2017).

- Course-related field trips: Arkansas Alkali Province, Hot Springs/Little Rock, AR (Mineralogy, 2019, 2022); Arbuckle Mountains, OK (Structural Geology, 2019); Llano Uplift, Llano, TX (Petrology, 2017-2019, 2022); Boulder batholith, Butte, MT (Earth Materials, 2014); Western Montana (Introduction to Physical Geology, 2014); Walden Pond, Concord, MA (Environmental Geology, 2006-2008); Beaches of the North Shore, MA (Oceanography, 2007).
- Intensive field course, Geology of Cape Cod (2007-2009). A five-day intensive field course on landforms, deposits, and processes, from glacial deposition to coastal modification. Field methods included field observations, map reading, orienteering, field notes, beach profiling, and sediment sampling.
- Instructor, Maps & Mapping (2007). Field techniques addressed include map reading, orienteering, GPS-assisted orienteering, and topographic surveying.

Participant, Field Experiences:

- Windows into the Cretaceous Mantle of the North American Mid-Continent – Kimberlites of Riley County, 2019 Joint GSA Section Meeting (South-Central/North-Central/Rocky Mountain Sections), Manhattan, Kansas (March 2019)
- Minerals and Geologic History of Magnet Cove, 2018 GSA South-Central Section Meeting, Little Rock, Arkansas (March 2018)
- New England Intercollegiate Geologic Conference: Westfield, Massachusetts (2008); Québec City, Canada (2007); New Haven, Connecticut (2005); Millinocket, Maine (1994)
- Graduate coursework included field trips throughout New England, New York, Idaho, and Montana, emphasizing igneous and metamorphic petrology, structural geology, and regional tectonic history.
- November 1999. Continental Dynamics – Rocky Mountain (CD-ROM) seismic reflection experiment, Las Vegas, New Mexico. Placement and collection of independent active source geophones (volunteer)
- August 1999. Five College Geology Field Trip: Exploration of the metamorphic petrology of the Grenville Province in the vicinity of Bancroft, Ontario (10 days)
- New York State Geological Association Field Trips: Schenectady (1995)

SERVICE & OUTREACH

Science & Career Outreach

- Curriculum development, Minerals, Light & Color, for Houston Gem & Mineral Society, Dallas Gem & Mineral Society, and East Texas Gem and Mineral Society shows (2022-2023)
- Guest speaker (Zoom), Travis Intermediate School Sixth Grade Science Classes, Conroe ISD, Texas (2021)
- Showcase Saturday, Stephen F. Austin State University (2017, 2020)
- Women in STEM poster session, Stephen F. Austin State University (2017, 2018)
- Abstract Reviewer and Judge, Conference on Undergraduate Research, University of Montana (2011-2015)
- Sample identification, National Fossil Day, University of Montana (2014)
- Contributor, “Welcome to Superfund, Montana,” radio documentary [M.S. thesis] by Allison Mills, University of Montana, <https://mills.atavist.com/neihart-monarch> (2014)
- Panelist, “Conversations of Consequence: Women in Science and Academia,” Journey Through Girl Scouting 1972-1991, Girl Scouts of Montana and Wyoming (2012)

Mentorship & Advising

- Undergraduate Mentor, Department of Geology, Stephen F. Austin State University (Fall 2017-present)
- Success Coach, Generation Jacks (first-generation learning community), Stephen F. Austin State University (2017-2020; 5 mentees)
- Undergraduate student advisor, Montana State University (2015-2016)
- First Year Advisor, Bentley University (eight students) (2008-2009)

Professional Service

- Reviewer: Geology (2019), GSA Bulletin (2018), International Geology Review (2015), National Science Foundation (2020, 2021, 2022, 2023)

- Session co-chair, D4 The Geoscience Community: Strategies and Practices for Enhancing Diversity, Learning, and Information Sharing, 2020 GSA South-Central Section Meeting, Fort Worth, Texas
- Session co-chair, T15 Innovative Approaches to Broadening Student Geoscience Experiences across the Midcontinent, 2019 GSA South-Central Joint Section Meeting, Manhattan, Kansas
- Session co-chair, Tectonics: Exhumation, Erosion, Subsidence, and Rotation, 2015 GSA Annual Meeting, Baltimore

University Service

- Panelist, Provost's Panel on Teaching Excellence, Camp CTL (August 2022)
- Geology representative, Football Recruiting Weekend (January 2019)
- Academic Integrity Committee, College of Sciences and Mathematics representative, Stephen F. Austin State University (2018-present)
- Library Committee, College of Sciences and Mathematics representative, Stephen F. Austin State University (2017-2019)
- Graduate School Faculty, member, Stephen F. Austin State University (2016-present)
- Faculty Server, Breakfast by Moonlight, Bentley University (2006-2008)

College Service

- Teaching Excellence Committee, College of Sciences and Mathematics, Stephen F. Austin State University (2023-)
- Showcase Preview, Baker Pattillo Student Center, Stephen F. Austin State University (October 2022)
- College of Sciences and Mathematics Open House, Family Weekend, Cole STEM Building, Stephen F. Austin State University (September 2022)
- Distinguished High School Event, Stephen F. Austin State University (March 2022)
- Moderator, STEM Scholar Meeting, College of Sciences and Mathematics, Stephen F. Austin State University (March 2022)
- Accepted Student Event, Cole STEM Building, Stephen F. Austin State University (2021, 2022, 2023)
- Virtual Transfer Orientation, Stephen F. Austin State University (April 2021, June 2021)
- Virtual Transfer Showcase, Stephen F. Austin State University (October 2020, February 2021)
- Volunteer, Center for Teaching & Learning staff observation (October 2019)
- Designer, Department of Geology display case, Cole STEM Building, Stephen F. Austin State University (2019)
- Geology representative, presentation to local school district personnel, STEM Center, Stephen F. Austin State University (February 2019)
- SURE (Summer Undergraduate Research Experience) committee, Stephen F. Austin State University (2018)
- Strategic Plan sub-committee: Dual Credit Enrollment, Stephen F. Austin State University (2017-2018)
- College Council, Stephen F. Austin State University (2016-2018)

Department Service

- Houston Gem & Mineral Society Show, Houston, Texas (November 2022)
- Member, Structural Geologist search committee, Department of Geology, Stephen F. Austin State University (2021)
- Chair, Undergraduate Recruitment Committee, Department of Geology, Stephen F. Austin State University (2021)
- Organizer, Geology Student Recognition & Awards, Department of Geology, Stephen F. Austin State University (2019, 2021-present)
- Organizer, Rock Talks (presenting topics of interest to undergraduates), Department of Geology, Stephen F. Austin State University (2019-present)
- Faculty Organizer/Presenter, Lumberjack Orientation Academic Overview, Department of Geology, Stephen F. Austin State University (2019-present)
- Member, Graduate Program Committee, Department of Geology, Stephen F. Austin State University (2019)
- Member, Geology Lecturer search committee, Department of Geology, Stephen F. Austin State University (2019)

- Advisor, Sigma Gamma Epsilon, Gamma Phi chapter (2019-present)
- Undergraduate Program Coordinator, Department of Geology, Stephen F. Austin State University (2018-present)
- Presenter, “Abstracts & Conferences,” Geoscience Research Seminar Series, Department of Geology, Stephen F. Austin State University (November 2018, October 2019)
- Organizer, 1st Annual Department of Geology Earth Science Week Celebration (speaker and open house) (October 2018)
- Member, Structural Geologist search committee, Department of Geology, Stephen F. Austin State University (2018)
- Presenter, “Defining the Scope of a Research Project,” Geoscience Research Seminar Series, Department of Geology, Stephen F. Austin State University (September 2017)
- Organizer, Department of Geology Convocation, Stephen F. Austin State University (Fall semesters, 2017-2019, 2021-present)
- Reorganization, Microscopy Laboratory, Department of Geology, Stephen F. Austin State University (Summer 2017)
- Social Media Coordinator (Facebook, Instagram, Twitter), Department of Geology, Stephen F. Austin State University (2017-present)
- Presenter, “Research Ethics,” Thesis Research Methods, Department of Geology, Stephen F. Austin State University (March 2017, October 2018, October 2019)
- Co-chair, Curriculum Mapping Committee, Department of Geology, Stephen F. Austin State University (2017-2019)
- Member, Petroleum Geologist search committee, Department of Geology, Stephen F. Austin State University (2016-2017; 2017-2018)
- Student Coordinator, Fall 2012 Department of Geosciences Colloquium, University of Montana (2012)
- Chair, Student Faculty Evaluation Committee, Department of Geosciences, University of Montana (2010)

PROFESSIONAL DEVELOPMENT

Diversity & Inclusion

- Towards a more inclusive geosciences: Teaching strategies and policies to support all students: NAGT Webinar (May 2022)
- Climate Survey of the Geosciences: Disproportionate impacts on historically excluded groups: NAGT Webinar (February 2022)
- Graduate student onboarding courses: Exposing the hidden curriculum to help your students succeed, NAGT Webinar (March 2021)
- SFA Diversity Champion: Graduate, Diversity and Inclusion Certification Program, SFA Office of Multicultural Affairs (Completed Spring 2021)
- Mental Health Parity in Education, SFA Office of Multicultural Affairs (November 2020)
- Classroom and Campus Accommodations for Students with Disabilities, SFA Office of Multicultural Affairs (August 2020)
- Trauma Informed Classroom, Diversity and Inclusion Certification program, SFA Office of Multicultural Affairs (August 2020)
- Shifting our Language to Create Inclusive Classrooms, Camp CTL, SFA Center for Teaching and Learning (August 2020)
- Deaf Culture 101, Diversity and Inclusion Certification program, SFA Office of Multicultural Affairs (August 2020)
- Building a More Inclusive Syllabus: Welcoming Students’ Identities Before Classes, Diversity and Inclusion Certification program, SFA Office of Multicultural Affairs (August 2020)
- Be PROUD of Who You ARE: Understanding Gender, Sexuality, and the LGBTQIA+ Lumberjack Community, Diversity and Inclusion Certification program, SFA office of Multicultural Affairs (August 2020)

- Latinidad at SFASU: Cycles of Oppression, Diversity and Inclusion Certification program, SFA Office of Multicultural Affairs (March 2020)
- Diversity and Inclusion at SFA: Foundations, Diversity and Inclusion Certification program, SFA Office of Multicultural Affairs (January 2020)
- GenJacks Success Coach Program: Mental Health Awareness (February 2019)
- Safe Space Ally Training, Stephen F. Austin State University (November 2017)
- New Faculty Orientation, Stephen F. Austin State University (Fall 2016)
- Working with Veterans, Center for Faculty Excellence, Montana State University (October 2015)
- Bentley Ally Network Workshop. Creating a safe place for LGBTQ people at Bentley in order to enhance the learning experience for all. Bentley College (August 2007)

Science & Career

- SERC Early Career Geoscience Faculty Workshop: Teaching, Research, and Managing Your Career, University of Maryland, College Park (July 2017)
- Service: Making Service Serve You, Too (Mentoring Series Conversation Circle #3), Stephen F. Austin State University (April 2017)
- Preparing for an Academic Career in the Geosciences, *On the Cutting Edge*, University of North Carolina, Chapel Hill (June 2012)
- Pursuing an Academic Career Virtual Event Series – Faculty Positions: Exploring the Range of Possibilities, *On the Cutting Edge* webinar (June 2011)
- UCLA Ion Microprobe Student Workshop, Los Angeles, California (February 2010)
- CD-ROM (Continental Dynamics – Rocky Mountain Project) workshop and field trips, Albuquerque, New Mexico (Spring 2001)
- CD-ROM (Continental Dynamics – Rocky Mountain Project) workshop and field trips, Boulder, Colorado. (Spring 2000)

Teaching & Research

- Exploring ChatGPT, SFA Center for Teaching and Learning (March 2023)
- Navigating NSF, Webinar, Earth Science Women's Network (February 2023)
- Pedagogical Theft: The Value of Emulation in Innovative Teaching, Camp CTL, SFA Center for Teaching and Learning (August 2022)
- Critique and Feedback in the Classroom: A Faculty Panel, Camp CTL, SFA Center for Teaching and Learning (August 2022)
- Working with Students of Concern, SFA Center for Teaching & Learning (February 2022)
- Recruitment & Retention Workshop, Stephen F. Austin State University (April 2022)
- Asynchronous Minutes: Design Tips and Good Examples (August 2021)
- Building Better Brightspace Rubrics (August 2021)
- Teaching Learning Mindsets (August 2021)
- Discussions Beyond the Basics: 20 Tips for More Efficient, Effective Use of the Brightspace Discussions Tool (August 2021)
- Ready to Return to the Classroom? Maybe, Maybe Not (August 2021)
- Reduce, Reuse, and Recycle: Repurposing 2020's Resources into Future Classroom Success (August 2021)
- Grant Writing 101, SFA Office of Research & Graduate Studies (July 2021)
- Brightspace Attendance Tool Quickstart, Camp CTL, SFA Center for Teaching and Learning (August 2020)
- Meet Wakelet, Camp CTL, SFA Center for Teaching and Learning (August 2020)
- Brightspace Intelligent Agents, Camp CTL, SFA Center for Teaching and Learning (August 2020)
- The Art of the Nudge, Camp CTL, SFA Center for Teaching and Learning (August 2020)
- Did Someone Say Flipgrid?, Camp CTL, SFA Center for Teaching and Learning (August 2020)
- Lessons from *When*: Applying the Scientific Secrets of Perfect Timing to Your Courses, Camp CTL, SFA Center for Teaching and Learning (August 2020)
- Learning for All: How to Build Accessible Learning Environments, SFA Center for Teaching and Learning (July 2020)

- How to Flourish at a Distance, SFA Center for Teaching and Learning (July 2020)
- Rules of (Asynchronous) Engagement, SFA Center for Teaching and Learning (July 2020)
- Rules of (Real-Time) Engagement, SFA Center for Teaching and Learning (July 2020)
- Hyflexing Your Way to Multimodal Course Design, SFA Center for Teaching and Learning (July 2020)
- Hybrid-ging Modalities: Creating Instructional Blends That Work, SFA Center for Teaching and Learning (July 2020)
- Flexible Ways to Teach and Learn for Fall 2020, SFA Center for Teaching and Learning (July 2020)
- Using Google Earth for Remote Teaching, GSA-NAGT webinar (June 2020)
- Online Instructor Certification (6 weeks), Center for Teaching and Learning, Stephen F. Austin State University (June 2020 – July 2020)
- Social Media for Scientists Workshop, Geological Society of America Annual Meeting, Phoenix, Arizona (September 2019)
- Exploring a Career in the Minerals Industry Webinar, Geological Society of America GeoCareers (August 2019)
- Perspectives Panel on Universal Design for Learning, Center for Teaching and Learning, Stephen F. Austin State University (February 2017)
- Foundations of Teaching and Learning, pedagogy for new faculty, Stephen F. Austin State University (Fall 2016)
- Maximizing Meetings: Learn to Have Impactful Conversations with Students, Academic Advising Center and Center for Faculty Excellence, Montana State University (September 2015)
- Teaching Introductory Geoscience in the 21st Century, *On the Cutting Edge*, Carleton College, Northfield, Minnesota (July 2008)
- National Association of Geoscience Teachers New England Section Annual Meeting and Conference: Sharing Best Practices in Geoscience Teaching, Manchester Community College, Connecticut (October 2007)
- Interdisciplinary Faculty Workshop: Using Writing to Enhance Learning. Bentley College (May 2007)
- Wilder Teaching Professors Workshop Series, Bentley University (2005-2009)

Practical Training

- SFA Compliance Training, Stephen F. Austin State University (December 2022)
- Acceptable Use of Information Resources, Stephen F. Austin State University (December 2022)
- Cayuse – Internal Grant Proposal Training; Cayuse – External Grant Proposal Training, Stephen F. Austin State University (August 2022)
- Orientation to COVID-19 Minimum Standard Health Protocols, Stephen F. Austin State University (July 2020)
- Title IX, Policy 2.13, and Reporting Training, Stephen F. Austin State University (December 2019)
- Get Inclusive – Title IX Training, Stephen F. Austin State University (October 2019, December 2022)
- Risks of Social Media Sharing Training, Stephen F. Austin State University (August 2019, March 2020, March 2021)
- Security Awareness Training, Stephen F. Austin State University (February 2019, February 2020, March 2021, March 2022, December 2022)
- Committee Member - Curriculum Training (Digarc), Stephen F. Austin State University (October 2018)
- EEO Laws and Discrimination Prevention for Texas, Stephen F. Austin State University (August 2018, November 2020, December 2022)
- Ethics Online Training, Stephen F. Austin State University (April 2018, August 2019, November 2020, August 2022, December 2022)
- Be the One: Human Trafficking Awareness, Stephen F. Austin State University (April 2018)
- Property Management Training, Stephen F. Austin State University (May 2017, May 2019)
- Faculty Activity Report (FAR) Training Class, Stephen F. Austin State University (April 2017)
- Search Committee Training, Stephen F. Austin State University (January 2017, March 2019, May 2021)

- FERPA Training, Stephen F. Austin State University (September 2016, November 2018, November 2019, November 2020)
- Security Basics, Stephen F. Austin State University (September 2016, October 2017)
- Van Certification, Stephen F. Austin State University (August 2016, August 2019, September 2022)
- Defensive Driving, Stephen F. Austin State University (August 2016, September 2019, September 2022)
- HazComm Training, Stephen F. Austin State University (August 2016)
- NEO Training, Stephen F. Austin State University (August 2016)

PROFESSIONAL MEMBERSHIPS

American Geophysical Union, 2007-present

Association for Women Geoscientists, 2011-present

Geological Society of America, 1998-present

International Association for Geoscience Diversity, 2017-present

Mineralogical Society of America, 2010-2015, 2019-present

National Association of Geoscience Teachers, 2003-present

Texas Academy of Science, 2020-present