

Elizabeth A. Erickson, Ph.D.

Geology Technical Director

Department of Geology – Colorado College – 14 E. Cache La Poudre, Colorado Springs, CO 80903
erickson@coloradocollege.edu - www.elizabeth-erickson.com

EDUCATION

2015-2023	Ph.D., Earth Science, University of California, Santa Barbara (UCSB) Department of Earth Science <i>Advisor:</i> Dr. John M. Cottle <i>Thesis title:</i> “Ross Orogen evolution: Investigating the magmatic record along the paleo-Pacific margin of Gondwana”	GPA:3.92/4.00
2007-2011	B.A., Geology & Environmental Studies Magna Cum Laude, Cornell College, Mount Vernon, IA Department of Geology, Distinction in Geology <i>Advisor:</i> Dr. Benjamin J. Greenstein <i>Honors thesis title:</i> “Using epibiont successional patterns to determine the mode of accumulation of Late Pleistocene fossil reefs” Phi Beta Kappa	GPA: 3.83/4.00
2007-2008	Emporia State University, Emporia, KS [non-degree college credits]	GPA: 4.0/4.0
2006-2007	Colby Community College, Colby, KS [non-degree college credits]	GPA: 4.0/4.0
2003-2007	Colby High School, Colby, KS Valedictorian	GPA: 4.0/4.0

PROFESSIONAL EXPERIENCE *(references available upon request)*

2023-present	Technical Director at Colorado Collee, <i>Colorado Springs, CO</i>
2018-2022	Associate Instructor at UCSB, <i>Santa Barbara, CA</i>
2015-2022	Teaching Assistant at UCSB, <i>Santa Barbara, CA</i>
2020-2021	Cashier at Sprouts Farmers Market, <i>Goleta, CA</i>
2016-2021	NSF Graduate Research Fellowship Program (GRFP) at UCSB, <i>Santa Barbara, CA</i>
2019	Field Course Cook (Earth 104B: Field Methods: Rainbow Basin) at UCSB, <i>Santa Barbara, CA</i>
2018-2019	Graduate Student Researcher at UCSB, <i>Santa Barbara, CA</i>
2018	Field Course Cook (Earth 104B: Field Methods: Rainbow Basin) at UCSB, <i>Santa Barbara, CA</i>
2017-2018	Earth Science Speaker’s Club Student Host at UCSB, <i>Santa Barbara, CA</i>
2017	Field Course Cook (Earth 6: Mountains, Boots, and Backpacks: Field Study of the High Sierra) at UCSB, <i>Santa Barbara, CA</i>
2014-2015	Training and Health, Safety, and Environmental Manager at COLUMBINE LOGGING, INC., <i>Denver, CO</i>
2012-2014	Lead Well Site Geologist at COLUMBINE LOGGING, INC., <i>Denver, CO</i>
2012	Agricultural Technician at K-STATE NW RESEARCH-EXTENSION CENTER., <i>Colby, KS</i>
2010-2011	Food Service Worker at CORNELL COLLEGE, <i>Mount Vernon, IA</i>
2008-2011	Work Study to Geology Department at CORNELL COLLEGE, <i>Mount Vernon, IA</i>
2010	Teaching Assistant to Geology Department at CORNELL COLLEGE, <i>Mount Vernon, IA</i>
2008-2010	Assistant to Business Office Accounts & Loan Manager at CORNELL COLLEGE, <i>Mount Vernon, IA</i>
2009	NSF Research Experience for Undergraduates (REU) at UMN, <i>Minneapolis, MN</i>
2008	Internship at IOWA OFFICE OF THE STATE ARCHEOLOGIST, <i>Iowa City, IA</i>

TEACHING AND MENTORING EXPERIENCE

2022	Teaching Assistant EARTH 20 “Antarctica” (Sp22) <ul style="list-style-type: none">▪ <i>Course instructor:</i> Dr. Alex Wrobel, UCSB▪ <i>Duties:</i> Prepare & grade online course labs, lead lab sections, maintain digital office hours. Associate Instructor EARTH 10 “Antarctica: The Last Place on Earth” (W22) <ul style="list-style-type: none">▪ <i>Duties:</i> Update and administer course material, lectures, lab demonstrations, quizzes, and exams; maintain online course materials; calculate student course grades; oversee TA work.
2021	Associate Instructor EARTH 10 “Antarctica: The Last Place on Earth” (SuB21) <ul style="list-style-type: none">▪ <i>Duties:</i> Update and administer course material, lectures, lab demonstrations, quizzes, and exams into online format; maintain online course materials; calculate student course grades; oversee TA work. Teaching Assistant EARTH 7 “Dinosaurs” (Sp21) <ul style="list-style-type: none">▪ <i>Course instructor:</i> Dr. John Moore, UCSB

Elizabeth A. Erickson, Ph.D.

- *Duties:* Prepare & grade online course labs, lead online lab sections, maintain digital office hours.
- Teaching Assistant** Instructional Support (W21)
 - *Duties:* Support active instructors with technical issues, online course content, video editing, software applications, and GauchoSpace technology.
- Teaching Assistant** EARTH 20 “Geologic Catastrophes” (W21)
 - *Course instructor:* *Melissa Scruggs, M.S., UCSB*
 - *Duties:* Prepare & grade online course labs and weekly discussion forums, maintain digital office hours.
- 2020 **Mentor for Geoscience Enrichment and Mentoring for Students by Students (GEMSS)**
 - Ranpeng Li and Roxana Lagunas, 2020-21 academic year.
 - Provide support and insight to the department of Earth Science undergraduates for academic, professional, and personal goals. Give guidance for navigating the Earth Science major, graduate school applications and prospective advisor search, internship applications and options, career path discussions.
- Teaching Assistant** EARTH 124T/224T “Thermodynamics” (F20)
 - *Course instructor:* *Dr. Brad Hacker, UCSB*
 - *Duties:* Prepare and grade online Problem Sets, maintain digital office hours.
- Associate Instructor** EARTH 10 “Antarctica: The Last Place on Earth” (SuB20)
 - *Duties:* Update and administer course material, lectures, lab demonstrations, quizzes, and exams into online format; maintain online course materials; calculate student course grades; oversee TA work.
- Teaching Assistant** EARTH 7 “Dinosaurs” (Sp20)
 - *Course instructor:* *Dr. John Moore, UCSB*
 - *Duties:* Prepare & grade online course labs and weekly discussion forums, maintain digital office hours.
- 2019 **Associate Instructor** EARTH 10 “Antarctica: The Last Place on Earth” (SuB19)
 - *Duties:* Update and administer course material, lectures, quizzes, and exams; maintain online course materials; calculate and submit student course grades; oversee Teaching Assistant work duties.
- Mentor for Undergraduate Senior Honors Project**
 - Nicole Aikin, 2018-19 academic year, “Reconnaissance geochronology of the Ohio Range, southern Horlick Mountains, Antarctica: Insights into crustal evolution of the Neoproterozoic to Paleozoic Ross Orogen magmatism from zircon U-Pb and Hf”
 - Train student in mineral separation techniques and laboratory processes, supervise sample processing, data acquisition, manuscript guidance.
- 2018 **Associate Instructor** EARTH 10 “Antarctica: The Last Place on Earth” (SuB18)
 - *Duties:* Design and administer course material, lectures, quizzes, and exams; maintain online course materials; calculate and submit student course grades; oversee Teaching Assistant work duties.
- EUREKA! Mentor for the UCSB Center for Science and Engineering Partnerships (CSEP)**
 - Charu Garapaty, 2018 summer
 - Summer research program for UCSB undergraduates in STEM disciplines through the California Nanosystems Institute (CNSI) to address academic skills, social networking, and career exploration needed for success in the sciences.
- Summer Teaching Institute for Associates (STIA)**
 - Pre-summer orientation program for planning, conducting, and assessing teaching of undergraduate courses sponsored by the Graduate Division and Instructional Development at UCSB.
- Mentor for Undergraduate Senior Honors Project**
 - C.J. Lemler, 2017-18 academic year, “U-Pb geochronology and whole-rock geochemistry of orthogneisses in the Miller Range, Antarctica”
 - Train student in mineral separation techniques and laboratory processes, supervise sample processing, data acquisition and synthesis, manuscript guidance.
- Teaching Assistant** EARTH 177/277 “Ore Deposits and Mineral Resources” (Sp18)
 - *Course instructor:* *Dr. John Cottle and Dr. Phil Gans, UCSB*
 - *Duties:* Update, prepare, and lead course labs, maintain office hours, grade assignments.
- Teaching Assistant** EARTH 10 “Antarctica: The Last Place on Earth” (W18)
 - *Course instructor:* *Dr. Allison Price, UCSB*
 - *Duties:* Prepare and lead course labs, maintain office hours, grade assignments, and guest lecturing.
- 2017 **Guest Lecturer** EARTH 10 “Antarctica: The Last Place on Earth” (F17)
 - *Course instructor:* *Dr. John Cottle, UCSB*
- Teaching Assistant** EARTH 115 “Analytical Methods” (W17)
 - *Course instructor:* *Dr. Matt Rioux, UCSB*

Elizabeth A. Erickson, Ph.D.

- 2016
- *Duties:* Lead course labs, maintain office hours, grade assignments.
- Teaching Assistant** EARTH 20 “Geologic Catastrophes” (Su16)
- *Course instructor:* Melissa Scruggs, M.S., UCSB
 - *Duties:* Lead course labs, maintain office hours, grade assignments.
- Teaching Assistant** EARTH 7 “Dinosaurs” (Sp16)
- *Course instructor:* Dr. Dan Luna, UCSB
 - *Duties:* Lead course labs, maintain office hours, grade assignments.
- Teaching Assistant** EARTH 2 “Physical Geology” (W16)
- *Course instructor:* Dr. Sabina Thomas, UCSB
 - *Duties:* Lead course labs, maintain office hours, grade assignments, lead day-long student field trips.
- 2015
- Teaching Assistant** EARTH 7 “Dinosaurs” (F15)
- *Course instructor:* Dr. Dan Luna, UCSB
 - *Duties:* Lead course labs, maintain office hours, grade assignments.
- 2010
- Teaching Assistant** GEO 111 “Physical Geology” (Block 8)
- *Course instructor:* Dr. Emily Walsh, Cornell College
 - *Duties:* Prepare course lab materials, lead study sessions, assist course labs, assist student field trips.

PUBLICATIONS

ABSTRACTS AND PRESENTATIONS

- Erickson, E.A.** and Cottle, J.M., 2019, Petrochronologic insight into episodic crustal recycling along the paleo-Pacific margin of Gondwana: Goldschmidt Abstracts 2019
- Erickson, E.A.** and Cottle, J.M., 2017, Ross Orogeny magmatism in Northern Victoria Land, Antarctica: insight into along-strike arc variation and comparison to the detrital zircon record: Geological Society of America Abstracts with Programs, v. 49, no. 6, doi:10.1130/abs/2017AM-299690.
- Erickson, E.A.** and Greenstein, B.J., 2011, Using epibiont successional patterns to determine the mode of accumulation of Late Pleistocene fossil reefs: Geological Society of America Abstracts with Programs, v. 43, no. 1, p. 68.
- Erickson, E.A.**, 2011, Using epibiont successional patterns to determine the mode of accumulation of Late Pleistocene fossil reefs: Cornell College 15th Annual Student Symposium, 16 April 2011, Mount Vernon, Iowa.
- Erickson, E.A.** and Greenstein, B., 2011, Using epibiont successional patterns to determine the mode of accumulation of Late Pleistocene fossil reefs: Abstract Northeastern (46th Annual) and North-Central (45th Annual) Joint Meeting, 20–22 March 2011, Pittsburgh, Pennsylvania.
- Calcote, R., Lynch, E.A., Hotchkiss, S.C., Woods, P., Drake, C., **Erickson, E.**, 2010, A mid-Holocene prairie extension in northern Wisconsin: American Quaternary Association (AMQUA) biennial meeting, 12-15 August 2010, Laramie, Wyoming.
- Erickson, E.A.**, 2010, Fire history from Little Round Lake, northwestern Wisconsin, USA: Cornell College 14th Annual Student Symposium, 17 April 2010, Mount Vernon, Iowa.
- Erickson, E.A.**, 2009, Fire history from Little Round Lake, northwestern Wisconsin, USA: UMN Geology and Geophysics NSF-REU Summer Internship Program, 6 August 2009, Minneapolis, Minnesota.

THESES

- Erickson, E.A.**, 2023, Ross Orogen evolution: Investigating the magmatic record along the paleo-Pacific margin of Gondwana [Ph.D. Dissertation]: University of California-Santa Barbara, 216 pp.
- Erickson, E.A.**, 2011, Using calcareous encrusting epibiont successional patterns to determine the mode of accumulation of Late Pleistocene fossil reefs [B.A. Thesis]: Cornell College, 90 pp.

TALKS AND PANELS

- Erickson, E.A.**, *Petrochronologic Insight into Episodic Crustal Recycling along the paleo-Pacific Margin of Gondwana*, Ask a Scientist Series, Asheville Museum of Science, 11 December 2020.
- Erickson, E.A.**, *Natural Hazards and Plate Tectonics*, The Knox School of Santa Barbara, 15 October 2019.
- Erickson, E.A.**, Moser, A., Johnson, T.A., *Geochronology Earth Science*, Laguna Blanca High School, 30 January 2019.
- Erickson, E.A.**, *Along-strike variation of continental arc magmatism during the Ross orogeny, Antarctica*, UCSB Speakers Club, 6 December 2018.
- Erickson, E.A.**, Penserini, B., Moser, A., Zurbuchen, J., *You Want to Go to Grad School?* Grad Student Panel, UCSB, 1 November 2018.
- Erickson, E.A.**, *Magmatic history of the paleo-Pacific margin of Gondwana*, Cornell College, 30 October 2018.

Elizabeth A. Erickson, Ph.D.

HONORS AND AWARDS

2021	GEMSS Mentor of the Year Award, Earth Science Student JEDI Council, UCSB
2020	Harry Glicken Memorial Fellowship for Outstanding PhD Candidate, Earth Science Department, UCSB
2019	UCSB Royal Geological Society of Goleta Award for Most Helpful Graduate Student
2019	Recognition for Commitment and Constant Support in Promoting Science Education in K-12 Schools, ScienceLine, Materials Research Laboratory Education Program, UCSB
2018	UCSB Royal Geological Society of Goleta Award for Best Shirt Design
2018	Alumni Graduate Award for Research Excellence, Earth Science Department, UCSB
2018	Award in Earth Science for Outstanding Contribution to Promoting Science in K-12 Schools, ScienceLine, Materials Research Laboratory Education Program, UCSB
2017	Antarctica Service Medal of the United States of America, National Science Foundation
2017	First place for “PolarPeople at home” Photo Contest, Association of Polar Early Career Scientists (APECS) <ul style="list-style-type: none">▪ Photo displayed in the UCSB Earth Science department
2016	UCSB Royal Geological Society of Goleta Award for Best FISH Czar
2011	Phi Beta Kappa, Beta Pi Chapter President, Cornell College
2011	<i>Magna Cum Laude</i> , Cornell College
2011	Herbert Hendricks Award to the Outstanding Senior Geology Major, Cornell College
2010	Barry M. Goldwater Scholarship Honorable Mention
2010	William H. Norton Geology Award for Outstanding Junior, Cornell College
2009	Research Experience for Undergraduates, National Science Foundation (NSF Award #0649044)
2009	Gene Hinman Geology Award for Excellence in Fieldwork, Cornell College

GRANTS AWARDED AS GRADUATE STUDENT

2020	Multidisciplinary Research on the Coronavirus and its Impacts (MRCI) Grant, UCSB
2019	2019-20 Doctoral Student Travel Grant, Graduate Division, UCSB
2019	Professional Development Award for Dissertation Write-in workshop, Graduate Division, UCSB
2019	Individualized Professional Skills (IPS) Grant, UCSB
2019	Graduate Travel Grant, Earth Research Institute (ERI), UCSB
2019	Grants-in-Aid Program - Arthur A. Meyerhoff Memorial Grant, AAPG Foundation
2018	Preston Cloud Award, Earth Science Department, UCSB
2017	Atwater Global Field Travel Award, Earth Science Department, UCSB
2017	Summer Research Fellowship, Earth Research Institute (ERI), UCSB
2016	Summer Research Fellowship, Earth Research Institute (ERI), UCSB
2016-2020	Graduate Research Fellowship Program, National Science Foundation (NSF Award #1650114)

GRANTS AWARDED AS UNDERGRADUATE STUDENT

2011	North-Central Section Student Travel Grant, Geological Society of America (GSA)
2010-2011	Student-Faculty Collaborative Research Grant, Cornell College
2010	Barry Center Wilderness Politics Course Award, Cornell College
2010	North-Central Section Undergrad Research Grant, Geological Society of America (GSA)
2010	Student Research Grant, Paleontological Society
2009	Cat Levy Off-Campus Study Award, Cornell College
2007-2011	Academic Trustee Scholarship, Cornell College
2007	Pete Henry Scholarship, Cornell College
2007	Sunflower Bank Community Ambassador Program Scholarship, Colby, Kansas

OUTREACH AND VOLUNTEER

2020-2021	UCSB Dept. of Earth Science T. Alex Johnson Award committee
2020-2021	UCSB Phi Beta Kappa Chapter election committee
2020-2021	UCSB Earth Science Geoscience Enrichment and Mentoring for Students by Students (GEMSS) mentor
2019-2021	UCSB Dept. of Earth Science Justice, Equity, Diversity, and Inclusion (JEDI) Council
2017-2021	500 Women Scientists, Santa Barbara Pod – Career Development Series committee Monthly Discussion Night coordinator Website Developer

Elizabeth A. Erickson, Ph.D.

2016-2021	UCSB Women in Science and Engineering (WiSE) mentor
2016-2021	UCSB Materials Research Laboratory (MRL) ScienceLine Scientist
2015-2021	UCSB Dept. of Earth Science Outreach
2018-2019	UCSB Dept. of Earth Science Graduate-Faculty Liaison
2018	Science-A-Thon 2018, Earth Science Women's Network, Inc. (ESWN)
2017-2018	UCSB Dept. of Earth Science Graduate Student Association President
2017	Girls Inc. – Boost Program mentor
2016-2017	UCSB Dept. of Earth Science Graduate-Faculty Liaison
2016-2017	UCSB Dept. of Earth Science Alumni Panel organizer
2015-2017	UCSB Sci-Trek Outreach Program
2015-2016	UCSB Dept. of Earth Science Distinguished Alumni committee
2015	California Diversity Forum – Earth Science recruiter

TECHNICAL EXPERIENCE

ANALYTICAL

Laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS)
Multi-collector ICP-MS
Quadrupole ICP-MS
Split stream ICP-MS (LASS)

Scanning Electron Microscopy
Secondary electron (SE) imaging
Backscattered electron (BSE) imaging
Cathodoluminescence (CL) imaging
Electron backscatter diffraction (EBSD)

X-ray Fluorescence (XRF)
Bruker Tracer 5 (handheld)
Panalytical Epsilon 4 (benchtop)

X-ray Diffraction (XRD)
Panalytical X-Pert Pro

Optical microscopy: transmitted and reflected
Tetracam Agricultural Digital Camera
Bloodhound Gas Detection and Pason Gas Analyzer

LABORATORY

Mechanical processing and sample preparation
Crushing, sawing, water density separation (JCR Zircon Separating Table), magnetic separation (Frantz LB-1 and Low-Field Control LFC-3), heavy-liquid density separation (methylene iodide)

Mineral separates from rock samples
Zircon, apatite, rutile

Glass bead preparation for X-ray fluorescence
Powdering, homogenization with flux material, and fusion in high-temp. oven

Thin section preparation

FIELD

Lithologic mapping, configuring dataloggers and field instruments, archaeological excavation and cataloging

SCIENTIFIC SOFTWARE

Data processing and analysis
Iolite 2.5, IgorPro, IsoPlotR, Iolite 4, R-Program, MATLAB, Python

Image processing, data plotting, and figure design
Adobe Illustrator and Photoshop, Affinity Designer, GIMP, FIJI, Iqpet, IR Flash, PixelWrench2

Geographic Information Systems
QGIS, ArcMap, Quantarctica

Oil and gas drilling
LPlot, MPlot, ZoneWise, SES 4, iBall

Other software
Microsoft Office, Dreamweaver, MacOS, WindowsOS

Elizabeth A. Erickson, Ph.D.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- 500 Women Scientists
- 1 Million Women in STEM (1MWIS)
- Women in Science and Engineering (WiSE)
- Sigma Gamma Epsilon (SGE)
- Phi Beta Kappa