



Iowa's Geological Resources Workshop

Summer
2019

for TEACHERS

Can you **Dig** it?

Earn two units of graduate credit and learn about Iowa's geological resources through an activity-based short course (EARTHSCI 6233 Iowa's Geological Resources for Teachers) through the University of Northern Iowa. **This year's focus:** Course activities will aid Iowa teachers in addressing specific science teaching standards.

The course begins with three online components in the spring to prepare you for the hands-on workshop visiting various geological sites and preparing curricular materials in July.

- Develop rock and mineral collections while obtaining a basic proficiency in their identification.
- Focus on the significance of these items in understanding and interpreting Earth's history and the geology of Iowa.
- Learn of the various economic and environmental aspects of Iowa geology.

Network with fellow geology educators

Participate in several exciting, hands-on activities in the field, and meet other Earth science teachers from across the state. Discuss what's working and what's not in your classrooms and share your tried-and-true methods for teaching about the geology of Iowa.

Applications due.....Feb. 13, 2018
Online via Adobe Connect...March 11, March 25, April 8, April 22
On the UNI campus.....June 9-13



EARN TWO UNITS OF GRADUATE CREDIT!

SPONSORED BY

The **IOWA LIMESTONE PRODUCERS ASSOCIATION**, in conjunction with the **UNI Department of Earth Science**, with assistance from the **Iowa Geological Survey**.

WORKSHOP DETAILS

Schedule

The **online component** of this workshop is offered via video conferencing (Adobe Connect) **Mondays from 4 to 6 p.m., March 11, March 25, April 8 and April 22**, through a series of two-hour classes covering the principles of geology in Iowa. An Adobe Connect test session will take place on **Monday, March 4** from at **5 p.m.**

The **on-campus component** begins at 9 a.m. on **Monday, June 10**, with a reception and check-in on the University of Northern Iowa campus. The workshop ends at 1 p.m. on **Thursday, June 13.**

Each day begins with announcements and an overview of the day's activities. There may also be evening sessions, which consist of special presentations, laboratory work and/or a review of the day's activities. This is an intensive course, and everyone is expected to participate in all workshop sessions.

If you are accepted for the workshop, further workshop details will be sent on or before Feb. 15.

Two regional geology trips will be provided to course participants. The trips will be on Saturdays with one trip in eastern/south-eastern Iowa and the other in central/north-central Iowa. Workshop participants will be encouraged to attend at least one of these spring field trips.

Housing

Students who desire housing on the University of Northern Iowa campus should notify Dr. Heinzl, who will help you make arrangements. Housing is air-conditioned. (*Housing costs are covered by the ILPA.*)

Cost

Due to the generous support of the **Iowa Limestone Producers Association (ILPA)** we are able to offer this workshop for a \$200 registration fee, plus a technology fee of \$38 (*billed upon acceptance*). This includes two units of UNI graduate credit, on-campus housing, most meals, transportation in the field and instructional costs.

Cancellations

If your plans change and you must cancel, please contact UNI Continuing & Distance Education at 319-273-7206 or 800-648-3864 as soon as possible so we may allow those on the waiting list the opportunity to attend. Cancellations must be received no later than **March 6, 2018**, in order to receive a full refund of the \$200 registration fee.

Further information

SCHEDULES AND FIELD TRIPS

Chad Heinzl, Associate Professor

Workshop Leader

UNI Department of Earth Science

Phone..... 319-273-6168

Email.....Chad.Heinzl@uni.edu

REGISTRATION AND BILLING

Jamie Anderson

UNI Continuing & Distance Education

Phone..... 319-273-7206

Toll-free 800-648-3864

Email.....Jamie.Anderson@uni.edu

SPONSORS

Iowa Limestone Producers Association

515-262-8668

www.limestone.org



**IOWA LIMESTONE
PRODUCERS ASSOCIATION**
Your limestone resource since 1945!

UNI Department of Earth Science

319-273-2759

www.earth.uni.edu

Iowa Geological Survey

319-335-1575

www.iihr.uiowa.edu/igs



Apply @ distance.uni.edu/geology

Iowa's Geological Resources for Teachers

WORKSHOP APPLICATION

APPLY NOW!

**Class size is limited
to 18 participants.**

Submit this form via:

Online application

distance.uni.edu/geology

Mail

Iowa's Geological Resources Workshop
Continuing & Distance Education
University of Northern Iowa
CEEE 10
Cedar Falls, IA 50614-0223

Application Deadline:

Feb. 13, 2018

Acceptance:

Selected participants will be notified on or before Feb. 15 and invited to enroll in the course.

**Please note: the workshop size is limited to 18 teachers.*

Name

Email

Home Address

Home City

Home State

Home Zip

Home Phone

School

School District

School Address

School City

School State

School Zip

School Phone

☐ Check here if you have applied for this workshop in the past.

How many years have you been teaching?

What subjects and grade levels have you taught / do you teach?

Why do you think this workshop would be beneficial to you?

Please list any current teaching endorsements.

TOPICS AND ACTIVITIES

History

- Processes at work in the formation and shape of the landscape and the sediments beneath the surface
- Environments past and present of the landscape and the subsurface
- Rocks, minerals and fossils in the geological record
- Collection and classification of rocks, minerals and fossils

Processes and Principles

- Stratigraphy, sedimentation, sedimentary environments
- Field activities as classroom events; taking students to the field for learning activities
- Geologic origin of limestone



Geology and Land Use

- Agriculture, environmental geology; drainage tile, ag wells, aquifers
- Landfills and waste management issues
- Land use and landscape; glacial topography and land use issues
- Resource management and land use



STEM through Geology

- Develop integrated STEM lesson plans through local hands-on geology activities
- Explore effective ways to meet Earth Science NGSS and Iowa Core Standards in stand-alone Earth Science course or through activities within an existing biology, chemistry, or physics course

Economic Geology

- Aggregate production and product application
- Sand and gravel operations and product applications
- Relationship of geological processes to locations of aggregate and sand and gravel locations
- Site visits to various economic geology facilities



Apply @ distance.uni.edu/geology