

Geologic Resources of Iowa for Teachers

Spring & Summer 2021

On-line: UNI continuing education & Adobe Connect then Summer workshop
Credits: 2 credit hours – UNI Grad. Credit
Sessions: Monday 4 to 6 pm
Sponsors: The Iowa Limestone Producers Association (ILPA) www.limestone.org
Professor: Dr. Chad Heinzl
Course website: <https://www.exploreiowageology.org/GeoResourcesOfIowa.php>
Contact: chad.heinzl@uni.edu , (319)-273-6168
Panopto to Zoom Sessions, Mondays 4 to 6PM, maybe taken in real-time OR asynchronously, whatever works for your schedules.

Learning objectives

- A. Discover Iowa's diverse geology & the benefits of their subsequent natural resources, while obtaining a basic proficiency in their identification
- B. Develop your own mineral, rock and fossil classroom collections
- C. Focus on the significance of these items in understanding and interpreting Earth's history and the geology of Iowa.
- D. Using the National Generation Science Standards and Iowa Core Curriculum explore effective pathways of addressing Earth and Environmental Science standards.
- E. Learn the various economic and environmental aspects of Iowa geology.

Course Description –

EarthSci6233 -

Introduction to the interactions and relationships between humans and natural resources: stone, clay and soil in beautiful Iowa ☺

Session 1 Welcome, Logistics then Geologic foundations, tools and concepts then
March 9, History and Importance of Geology in Iowa

Session 2 Geologic History of Iowa Part 1 - The Bedrock
March 23 Minerals and Rocks of Iowa and adjacent states

Session 3 Geologic History of Iowa Part 2 – The Bedrock continued
April 6 Mining in and around Iowa

Session 4 Geologic History of Iowa – The Surficial sediments
April 20 Economic Geology Part 2 – Soil, Land Use, & Environmental challenges

Session 5 Finishing up and getting ready for the summer session
May 4

- *There will be 3-4 recorded 50 minute sessions that support these live sessions.*

Summer workshop – July 12-15 (Monday to Thursday), subject to change

July 12 – A. Environments of Deposition, B. The Aggregate Industry C. Geology, NGSS/Iowa Core Curriculum

July 13 – A. Quarries Vs. pits, B. Quaternary Geology of Iowa, C. Economic Geology

July 14 – A. Paleontology, B. Cement Production, C. Iowa's Stratigraphy

June 15 – A. Geology of Eastern Iowa, B. Limestone Vs. Dolostone Aggregate, C. Karst Topography, caves and environmental geology

Grading

Course work	points
Pretest	20
Homework	
Session 1	20
Session 2	20
Session 3	20
Session 4	20
Field work (Summer 2020)	
4 days of participation	40
July 7 activity	20
July 8 activity	20
July 9 activity	20
July 10 activity	20
Post-test	20
	240 points

Approx. grade distribution

X>220 = A

X>200 = B

X>180 = C

Class Attendance and Participation

Course questions will reflect and cover class 1) discussions, 2) field and lab activities, 3) text/journal readings, and 4) small group activities. Anything I say/discuss is fair game for a quiz or exam. Attendance is essential. If you listen, ask questions, take very good notes, and study for tests chances for earning a good grade are high! And the general guidelines of UNI's attendance policy will be employed, <https://policies.uni.edu/306>).

UNI - Statements for Non-discrimination and Accessibility

A. Office of Compliance and Equity Management

The University of Northern Iowa does not discriminate in employment or education. Visit 13.03 Equal Opportunity & Non-Discrimination Statement (<https://policies.uni.edu/1303>) for additional information.

B. Student Accessibility Services - Non-discrimination based on Disabilities

The University of Northern Iowa (UNI) complies with the Americans with Disabilities Act Amendments Act of 2008 (ADAAA), Section 504 of the Rehabilitation Act of 1973, the

Fair Housing Act, and other applicable federal and state laws and regulations that prohibit discrimination on the basis of disability. To request accommodations please contact Student Accessibility Services (SAS), located at ITTC 007, for more information either at (319) 273-2677 or Email accessibility services@uni.edu. Visit Student Accessibility Services (<https://sas.uni.edu/>) for additional info.

Additional recommendations from UNI's Center for Excellence in Teaching & Learning

- A. Course materials, accessibility and opportunities for enhanced success
 - a. Textbook – Iowa Geological Past by Wayne I. Anderson – Will be provided to you courtesy of the Iowa Limestone Producers Association (ILPA)
 - b. Computers and data – For the online portion you will need access to a computer, a good internet connection and headphones with mic capabilities.
 - c. Field trips – Our summer course will be a series of field trips.
 - d. Course webpage – You will have access to some course materials and additional learning resources through the following webpage - <https://www.exploreiowageology.org/GeoResourcesOfIowa.php>
 - e. UNI-E-Learning – <https://elearning.uni.edu/>, This software will be used to help you keep track of your course progress - primarily scores from homework
 - f. Optional resources
 - 1) Iowa's Minerals by Paul Garvin
 - 2) Landforms of Iowa by Jean Prior

B. Introduction to Geology classroom civility –

- a. Be respectful to everyone at all times.
- b. Be on time, pay attention and participate.
- c. Represent UNI well when on and off campus.
- d. Reduce use and silence phones in class and during field trips.
- e. Social distancing and masks are required, please be respectful and safe 😊

C. UNI Covid-19 and Make-up Work Policy

Protecting our campus from COVID-19 depends on all of us acting with care and responsibility. To protect each other and our campus community, we are required to wear masks or face shields that cover our mouths and noses inside all campus buildings, including throughout the duration of class. We are asked to self-screen for COVID-19 symptoms, stay away from others and seek medical attention if we're not feeling well and/or experience any symptoms such as a fever over 100.4°, and to communicate and plan proactively to make up for missed learning. We will maintain physical distancing by sitting in designated areas in the classroom. Failure to follow these requirements can result in students being referred to the student conduct process and faculty being referred to the Associate Provost for Faculty. We take these steps together recognizing that my mask protects you, your mask protects me, and together wearing masks protects the entire UNI community. Our collective actions will determine

our ability to remain together in an in-person learning environment. Second, Faculty Senate has approved the following addendum to Policy 3.06 on attendance to make COVID-19 related absences excused. When students need to miss class for illness, self-isolation, or quarantine, faculty must provide a means for students to remain current on material or a way to make up work missed. Absences related to COVID-19 illness, self-isolation, or quarantine. Faculty teaching Face-to-Face must be prepared to also offer online instruction and/or have assignment alternatives for individual student who are unable to attend class due to COVID-related issues. This should also extend to field experiences that students may not be able to attend for the same reasons. Absences related to COVID-19 illness, self-isolation, or quarantine. Faculty must be prepared to offer online instruction and/or have assignment alternatives for individual students who are unable to attend class due to COVID-related health issues. To utilize these alternative delivery methods and/or assignments, students must report the issue by completing the Panther Health Survey; students directed not to come to campus or who are unable to participate in class due to COVID-19 related illness, self-isolation, or quarantine should utilize the information provided in the survey to have their faculty notified of their need to be absent. These same instruction/assignment alternatives should also extend to field experiences that students may not be able to attend for the same reasons. Questions related to COVID-19 testing should be directed to the Student Health Center COVID Hotline (319) 273-2100, Monday-Friday 8:00 am - 4:30 pm.

B. Pro-Tips for doing well in this class

1. Engage the content material before coming to the weekly discussions.
2. Participate in activities and discussions, ask a lot of questions ☺
3. If you have to miss a class please let me know ahead of time.
4. You will need to work, read, research and plan approximately 25 hours on your own time to complete the course work and learning opportunities.

C. Summer course

Due to a generous donation from the Iowa Limestone Producers Association, you are getting free tuition, lodging, field trip transportation, textbook, a hardhat, sampling bags and the majority of your summer course food paid for...

Required Items that you need to bring =

One pair of close-toed shoes, water bottle, a pair of pants, one long sleeved shirt notebook, about 15 pages of loose-leaf/lined paper, pencils... Our quarry visits require little skin showing/protective clothing Tennis shoes are fine

Suggested items

Personal snacks, sun hat, sunscreen, bug/tick spray, portable coffee mug if you like to drink coffee during the day.