

Opportunity to strengthen your Earth Science credentials (Posted Dec 2020)

Earth Science Essentials, an advanced online review of Earth Science for high school and middle school science teachers, will be offered May 19 – July 1, 2021 through Minnesota State University Moorhead.

This course provides a review of key concepts and practices of earth science at a level appropriate for science teachers already holding a degree in science. This largely-self-learning online course addresses many of the state licensure standards in earth science and is intended as partial preparation, along with in-person earth science teaching workshops addressing science as a practice, for teaching earth science at the high school level.

Students of the class will gain practice in:

- Reading the stories in rock and layers of rock using fundamental principles of geology.
- Figuring out key aspects of how our world and universe work, such as how we know about the Earth's core, how we know about Earth's deep past, and how we know about distant stars.
- Explaining key processes that shape the Earth and other planets, such as processes of climate and weather, river processes, geysers, volcanos, tectonics, chemical differentiation, and meteorite impacts.
- Reading graphs, interpreting experimental and observational data, identifying evidence and connecting evidence to conclusion, recognizing geological features in the field, and identifying simple rock types

In addition,

- There are optional labs and classroom exercises for you to try out or adapt to your own classrooms.
- Synchronous discussion sessions will allow you to confer with other science teachers on how to adapt labs and lessons to your own classes.

Course Syllabus: [http://web.mnstate.edu/colson/ESE/Earth Science Essentials \(ESE1\) Syllabus 2021.pdf](http://web.mnstate.edu/colson/ESE/Earth%20Science%20Essentials%20(ESE1)%20Syllabus%202021.pdf)

Course Outline: [http://web.mnstate.edu/colson/ESE/Earth Science Essentials \(ESE1\) Course Outline.pdf](http://web.mnstate.edu/colson/ESE/Earth%20Science%20Essentials%20(ESE1)%20Course%20Outline.pdf)

Preview Course Materials: <http://web.mnstate.edu/colson/ESE/ESE.html>

Registration Form: [http://web.mnstate.edu/colson/ESE/GEOS 499 and 599 ESE1 Registration.pdf](http://web.mnstate.edu/colson/ESE/GEOS%20499%20and%20599%20ESE1%20Registration.pdf)

Registration begins in February, 2021. The cost of the three-credit course, including the online course fees, is \$407 (undergraduate credit) or \$497 (graduate credit).