Summer 2018
Professional Development
Institutes for Educators

Diagnosis and Remediation of Reading Problems • May 14 - June 29
This online course is available to any teacher (Elementary or Secondary) to apply toward professional licensure. Whether you teach English language arts or physics, you and your students are “reading”- we read and code all the information we attend to. Many of the lessons we learn from reading alphabetic code can transfer to the challenges of reading numerical code. 3 cr. ED 5750

Teaching Science in Three Dimensions: The NGSS in Theory and Practice • July 2 – August 16
This grant-funded, online course examines the Next Generation Science Standards and Framework for K-12 Science Teaching (NGSS), the theory underlying them, and what it will take for teachers to transform science teaching practice in ways that align with these standards. The course will focus on on critiquing and developing lessons and assessments that incorporate the three dimensions of disciplinary core ideas, cross-cutting concepts, and science and engineering practices. 3 cr. ED 5540

Engineering Applications in the Physical Sciences • June 19 – 29
This course is intended to introduce engineering to pre-college teachers in order to help them acquire tools for integrating engineering into their science classrooms under the framework of the new Michigan Science Standards. The engineering process will be outlined, as will some of the "non-technical" aspects of engineering. Students will explore how the course objectives are related to the NGSS (and the new Michigan Science Standards). Students will be required to complete a design project that meets design criteria culminating in testing of the project and analysis of the results. 4 cr. ENG5100

Designing a Sustainable Future • June 26 – 29
Teachers will investigate product life cycle, green building design, renewable energy sources, low impact site design, water reuse, and transportation food systems with research scientists and engineers at Michigan Tech and community/teacher experts. Teachers can choose to earn 24 SCECHs for free, or 1 graduate credit for an additional cost and coursework expectations. 1 cr. ED 5640.2

Teaching with Spatial Technology (TwiST) • June 18 – 22 at Ferris State University and June 25 – 29 at Michigan Technological University
TwiST is designed to provide grades 6-12 teachers with meaningful and challenging lesson plans about using Geographic Information Systems (GIS) and Global Positioning Systems (GPS) in the classroom. TwiST is a week-long workshop intended to provide the participants with basic proficiencies about some of the many aspects of spatial technology which is growing in importance in this global environment. 25 SCECHs

Moosewatch for Educators • Offering 1: June 25 – July 2; Offering 2: July 25 – August 1
Limited to 5 participants per offering. Moosewatch for Educators is a unique field experience in support of the ecological study of wolves and moose at Isle Royale National Park. Educators will receive the technical instruction needed to participate as a member of a backcountry research team. You will learn research methods, backcountry navigation, and wilderness living skills. The course will integrate aspects of earth science, botany, general ecology, and the use of literature in teaching science. 45 SCECHs Pending.

Computational Tools and the Environment • May 7 - August 10
*Inquire about 2019 availability!
Application of computational tools for researching environmental engineering systems. Participants will gain an understanding of the discipline of environmental engineering and the research process, learn new computational tools that they can use with their students, and gain confidence in teaching about research and science. 3 cr. ED 5640

For course registration and details, please contact: teacherpd@mtu.edu or visit www.mtu.edu/cls/education/development/institutes