

We are excited to introduce you to our online **Training Talks** hosted by subject matter experts throughout the year. Each Training Talks will be hosted quarterly by a subject matter expert for a 1-2 hour session discussing the topics you want to talk about. If you have an idea for a Training Talks topic or would like to host a Training Talks session, please contact Traci Tobergte at ttobergte@osmre.gov or 720-545-6786.

WAITLIST: Please continue to register for classes with a waitlist as this indicates the interest and need to possibly add additional classes to the TIPS schedule.

Course Name	Course Description	Location	Dates
TIPS Training by Request	<p>TIPS schedules a variety of course dates and locations throughout the year, however we understand that sometimes our OSMRE, states, and tribe customers have additional training needs.</p> <p>There is a 10-person minimum (exceptions indicated in the training list). The ability to fulfill the request depends on the availability of TIPS instructors or budget for vendor approved training.</p> <p>Please submit your request using the registration link a minimum of 90 days prior to your requested dates.</p>	OPEN	OPEN
Training Talks	<p>February's Training Talk will be presented by Subject Matter Expert, Kam Pendleton. Kam will provide a quick overview of the evaluation of a touch screen monitor for digitizing features in GIS software from georeferenced, scanned map documents provided by the National Mine Map Repository and other sources.</p> <p>February's Training Talk will be 30-90 minutes in length.</p>	Online	February 4, 2021 1:00 EST/11:00
AutoCAD Essentials	<p>FOUNDATION- For new users</p> <p>This class provides attendees with a strong foundation for making AutoCAD or AutoCAD LT an effective and value addition to their professional skill set. Devised for professional who need to use AutoCAD or AutoCAD LT as a daily production tool, this class introduces students to the two-dimensional (2D) drafting environment, and the techniques required to edit existing drawings as well as create new drawings from scratch. Students will learn how to take a drawing file from its initial setup, through creating and modifying simple and complete objects, to detailed page setup and final printing.</p>	Online	February 8-11

Introduction to Remote Sensing (Pilot)	<p>FOUNDATION- For new users</p> <p>This course is an introductory course designed to provide a refresher for advanced users as well. The history of remote sensing and the fundamentals of electromagnetic radiation are presented. The three main components of a remote sensing system: the platform, the sensor, and the data management processing system are covered. Specific topics such as quality assurance, ground verification methods, archival, and space policy will be taught. Participants will complete online and hands-on field exercises to demonstrate proficiency in applying remote sensing observations.</p>	Online	February 16- March 5
Introduction to QGIS for Hydrological Applications	<p>Online Introduction to QGIS Course- QGIS 3.6 to QGIS 3.16</p> <p>This course is designed for professionals active in hydrology and water management, especially those involved in using simulation models for water management and performing GIS analysis. However, the course is also suitable for beginners in QGIS who want to learn GIS concepts and QGIS features in a problem-based learning manner.</p>	Online	February 22-25
Migrating from ArcMap to ArcGIS Pro	<p>INTERMEDIATE- For Experienced ArcMap users</p> <p>With faster tools and integrated 2D and 3D capabilities, ArcGIS Pro will streamline your GIS projects. This course prepares experienced ArcMap users to be productive right away. Learn essential ArcGIS Pro terminology and concepts and how to efficiently complete a variety of tasks related to mapping, editing, analyzing, and sharing geospatial data and resources.</p>	Online	March 1-2
Training Talk	<p>Discover the OSMRE GeoMine Web Application with Subject Matter Expert, Carrie Middleton. This Training Talk session will introduce users to the OSMRE GeoMine Web Application and demonstrate the functionality of it for use by OSMRE and SMCRA partners. March's Training Talk will be 1-2 hours in length.</p>	Online	March 4 3:00 EST/1:00 MDT

CAD 201: Carlson Mining Site Design for Permitting and Reclamation	<p>Carlson Mining is a design software for engineering, surveying, reclamation and mining professionals. AutoCAD serves as its graphics engine and drawing editor. Carlson Mining is an extension of AutoCAD that adds commands and enhancements for earthmoving and engineering.</p>	<p>Online</p>	<p>March 8-April 2</p>
Global Mapper- LiDAR Module	<p>INTERMEDIATE- For Experienced Global Mapper users</p> <p>This curriculum focuses on learning about and utilizing the principle features of Global Mapper. Employing a hands-on approach, this 12-hour class covers the key elements of the software including feature creation, cartographic rendering, 3D modeling and analysis, and data processing. The knowledge gained from this curriculum will empower you to leverage the fundamental concepts and skills necessary to operate Global Mapper at all levels</p>	<p>Online</p>	<p>March 16-17</p>
Creating and Editing Data with ArcGIS Pro	<p>ADVANCED- For Advanced Users</p> <p>Maintain the accuracy of your authoritative GIS data. This course teaches best practices to create accurate geographic data and maintain it over time. You will get ample hands-on practice with a variety of ArcGIS Pro tools that streamline the editing process and decrease the potential for errors when updating your GIS database.</p>	<p>Online</p>	<p>April 1-2</p>
Global Mapper	<p>FOUNDATION- For new users</p> <p>This curriculum focuses on learning about and utilizing the principle features of Global Mapper. Employing a hands-on approach, this 12-hour class covers the key elements of the software including feature creation, cartographic rendering, 3D modeling and analysis, and data processing. The knowledge gained from this curriculum will empower you to leverage the fundamental concepts and skills necessary to operate Global Mapper at all levels</p>	<p>Online</p>	<p>April 5-7</p>
Training Talk	<p>Join Subject Matter Expert, Brian Daily in discovering how to use ArcGIS Experience Builder as an alternative to PowerPoint. This will be a brief overview of ArcGIS Experience Builder, how to access the software, and demonstration of how to create a presentation using the software. April's Training Talk will be 1-2 hours in length.</p>	<p>Online</p>	<p>April 8 1:00 EST/11:00 MDT</p>

Introduction to AutoCAD Map 3D	<p>This class explores the capabilities of AutoCAD® Map 3D® in mapping and GIS, facilities management, civil engineering, and planning applications. You will learn the essentials of manipulating multiple drawing files, attaching and editing tabular data, natively accessing and working with external GIS data types (SHP, SDF, etc.), map creation and stylization, as well as Map Book generation. Knowledge of basic GIS concepts as well as a working knowledge of basic AutoCAD® commands and techniques is required.</p>	Online	April 13-15
Remote Sensing for SMCRA Applications (Pilot)	<p>INTERMEDIATE- For Experienced users</p> <p>This intermediate course will cover remote sensing methods used in applications specific to the Surface Mining Control and Reclamation Act of 1977. Electro-optical and synthetic aperture radar systems will be taught in the context of measuring specific features of interests such as surface hydrology, vegetation cover, landform changes, production activity, and climatic impacts. Emphasis will be on using mobile devices to build skill in recording observations in the field to verify remote sensing observations. Unmanned aerial systems, airborne, and spaceborne remote sensing applications will be presented along with hands-on exercises to reinforce learning objectives. Historical aspects of early artificial intelligence for monitoring surface mines will be discussed and current techniques taught.</p>	Denver	April 27- 29
Spatial Analysis with ArcGIS Pro	<p>ADVANCED- For Advanced Users</p> <p>Learn essential concepts and a standard workflow you can apply to any spatial analysis project. You will work with a variety of ArcGIS tools to explore, analyze, and produce reliable information from data. Course exercises use an Advanced license of ArcGIS Pro and ArcGIS 3D Analyst, ArcGIS Spatial Analyst, and ArcGIS Geostatistical Analyst.</p>	Online	May 3-5
Training Talks	<p>Join Mobile Device Expert, Nick Schaer to learn about the new ESRI Geographic Information System App Field Maps. Nick will discuss the mobilizing AGOL geodatabases and the Enterprise flexibility of the newest ESRI Mobile GIS Application for both Android and IOS devices. This talk will look at both existing and developmental functionality and will also include a live device demonstration. May's Training Talk will be 1-2 hours in length. Pre-registration is not required.</p>	Online	May 6

SEDCAD Applications and Extensions for Mine Permitting and Reclamation	<p>FOUNDATION- For new users</p> <p>This course covers a broad review of the basic hydrologic concepts and assumptions, defines the input parameters for watershed modeling and design of sediment control structures utilizing SEDCAD for mine permitting and reclamation. The participants will learn how to use SEDCAD to model peak flow, runoff volume, design erosion and sediment control structures and to evaluate permit applications. In addition, the course will cover utilizing SEDCAD to evaluate peak flow in preparation of Cumulative Hydrologic Impact Assessments. An introduction to the Revised Universal Soil Loss Equation will also be covered. Students will work example problems applying this software to model watersheds, analyze peak flow and design sediment basins, channels, culverts, silt fence and other drainage control structures.</p>	New Mexico	May 18-20
ArcGIS Pro: Essential Workflows	<p>FOUNDATION- For new users</p> <p>Extend your foundational GIS knowledge, get comfortable with the ArcGIS Pro application, and explore some of the most common GIS workflows. This course introduces techniques and general best practices to map, manage, analyze, and share data and other GIS resources. Hands-on exercises will give you the experience needed to efficiently work with ArcGIS Pro.</p>	Online	June 1-3
Global Mapper	<p>FOUNDATION- For new users</p> <p>This curriculum focuses on learning about and utilizing the principle features of Global Mapper. Employing a hands-on approach, this 12-hour class covers the key elements of the software including feature creation, cartographic rendering, 3D modeling and analysis, and data processing. The knowledge gained from this curriculum will empower you to leverage the fundamental concepts and skills necessary to operate Global Mapper at all levels</p>	Online	June 8-10
CAD 201: Carlson Mining Site Design for Permitting and Reclamation	<p>Carlson Mining is a design software for engineering, surveying, reclamation and mining professionals. AutoCAD serves as its graphics engine and drawing editor. Carlson Mining is an extension of AutoCAD that adds commands and enhancements for earthmoving and engineering.</p>	Texas	June 15-17

Sharing GIS Content using ArcGIS	<p>ADVANCED- For Advanced Users</p> <p>Enable location-based insights and data-driven decisions across your organization.</p> <p>Learn how to efficiently share a variety of geospatial resources to an ArcGIS Online organizational site or ArcGIS Enterprise portal website. This course teaches how to publish high-performing services that extend ArcGIS mapping and analytics capabilities across your organization.</p>	Online	July 1-2
Working with LiDAR ArcGIS	<p>ADVANCED- For Advanced Users</p> <p>Master the basics.</p> <p>This course introduces light detection and ranging (lidar) data concepts, collection methods, quality-control considerations, and common applications. Techniques to manage, edit, visualize, and share lidar-derived 2D and 3D information products using ArcGIS Pro are covered.</p>	Online	July 9
Mobile GIS Basics	<p>FOUNDATION- For new users</p> <p>Android/iOS/Windows based devices loaded with a tool set of applications (APPs) that can be used to navigate, take notes/pictures, and utilize geospatial data in the field. This course provides an introduction to Android, iOS, and Windows devices as a utility for SMCRA related business practices. Through lectures and classroom/field exercises, students learn about tools, menus, GPS, and geospatial data capabilities that come with Android/iOS/Windows devices. The course emphasizes best practice principles and considerations for common field tasks utilizing a number of Android/iOS/Windows APPs.</p>	West Virginia	July 13-15
ArcGIS Pro: Essential Workflows	<p>FOUNDATION- For new users</p> <p>Extend your foundational GIS knowledge, get comfortable with the ArcGIS Pro application, and explore some of the most common GIS workflows. This course introduces techniques and general best practices to map, manage, analyze, and share data and other GIS resources. Hands-on exercises will give you the experience needed to efficiently work with ArcGIS Pro.</p>	Online	August 2-4

Global Mapper	<p>FOUNDATION- For new users</p> <p>This curriculum focuses on learning about and utilizing the principle features of Global Mapper. Employing a hands-on approach, this 12-hour class covers the key elements of the software including feature creation, cartographic rendering, 3D modeling and analysis, and data processing. The knowledge gained from this curriculum will empower you to leverage the fundamental concepts and skills necessary to operate Global Mapper at all levels</p>	Online	August 17-19
AutoCAD Essentials	<p>FOUNDATION- For new users</p> <p>This class provides attendees with a strong foundation for making AutoCAD or AutoCAD LT an effective and value addition to their professional skill set. Devised for professional who need to use AutoCAD or AutoCAD LT as a daily production tool, this class introduces students to the two-dimensional (2D) drafting environment, and the techniques required to edit existing drawings as well as create new drawings from scratch. Students will learn how to take a drawing file from its initial setup, through creating and modifying simple and complete objects, to detailed page setup and final printing.</p>	Alexandria, VA	August 23-26
Migrating from ArcMap to ArcGIS Pro	<p>INTERMEDIATE- For Experienced ArcMap users</p> <p>With faster tools and integrated 2D and 3D capabilities, ArcGIS Pro will streamline your GIS projects. This course prepares experienced ArcMap users to be productive right away. Learn essential ArcGIS Pro terminology and concepts and how to efficiently complete a variety of tasks related to mapping, editing, analyzing, and sharing geospatial data and resources.</p>	Online	September 1-2
Hydraulic Engineering Center – River Analysis System (HEC-RAS 5.07) for Permitting and Reclamation	<p>FOUNDATION- For new users</p> <p>This course provides an overview of HEC-RAS modeling capabilities and shows each attendee how to use the model as a permitting/evaluation tool in flooding investigations. The course covers the most common uses of HEC-RAS such as water surface profiles, floodplain delineation, and the effects of bridges and culverts. The hands-on exercises allow participants to enter/edit flow and geometric data, perform flow simulations, develop water surface profiles and generate reports and graphics.</p>	Online	September 7- Oct 1

Training Talks	<p><i>Topic to be determined.</i> Training Talk will be 1-2 hours in length. Pre-registration required.</p>	Online	September 8
Global Mapper LiDAR Module	<p>INTERMEDIATE- For Experienced Global Mapper users</p> <p>This curriculum focuses on learning about and utilizing the principle features of Global Mapper. Employing a hands-on approach, this 12-hour class covers the key elements of the software including feature creation, cartographic rendering, 3D modeling and analysis, and data processing. The knowledge gained from this curriculum will empower you to leverage the fundamental concepts and skills necessary to operate Global Mapper at all levels</p>	Online	September 14-15