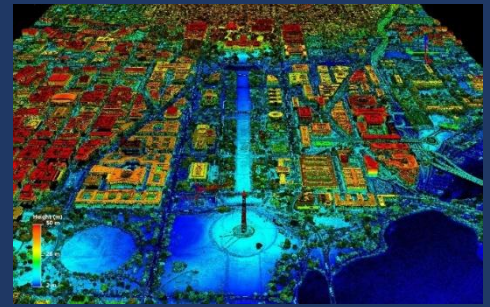


Drone Mapping Bootcamp Series

Four 2-day workshops from Missouri S&T |
St. Louis | November 2026 – February
2027



From learning what drone mapping can deliver to processing survey-grade data yourself, this series takes you the whole way. Offered by Missouri S&T Corporate and Professional Education in St. Louis, the workshops are marketed toward engineering but are equally valuable to geologists, archaeologists, environmental consultants, agricultural specialists, geotechnical professionals, and other field-based practitioners. Take all four as a bundle, or register for individual workshops.

Who Should Attend

- Decision-makers and project managers who expect to buy drone mapping products rather than produce them. Learn what to specify, and what to expect, for aerial imagery, orthophotography, lidar data, DEMs, DSMs, and point clouds.
- Professionals who want to do their own drone mapping, from FAA Part 107 certification through advanced data processing.
- Anyone who wants more proficient GNSS field surveys, for drone projects or any other application.

Schedule at a Glance

Workshop	Dates (2 days each)	Best for
1 Introduction to Drone Mapping with LiDAR & SfM Photogrammetry	Jan 14 & 15, 2027	Everyone: data consumers and future mappers
2 Drone Pilot Certification Prep (FAA Part 107)	Nov 5 & 6, 2026 (alternate: Mar 4 & 5, 2027)	Anyone who will fly or supervise flights
3 GPS/GNSS RTK and PPK Mapping and Data Processing	Jan 28 & 29, 2027	Field professionals, with or without drones
4 Advanced LiDAR and SfM Photogrammetry Data Processing	Feb 18 & 19, 2027	Those producing mapping deliverables

The Workshops

1 | Introduction to Drone Mapping with LiDAR & SfM Photogrammetry

Jan 14 & 15, 2027 A comprehensive, end-to-end overview, and the right starting point whether you will fly the missions or simply rely on the results. Even if you never map yourself, you will become a better consumer of the data.

- How SfM photogrammetry and lidar work, where each excels, and how GNSS delivers engineering-grade accuracy
- Drone hardware, software platforms, mission planning, field operations, core processing workflows, and the regulatory and safety framework for flight
- How to plan, specify, and interpret imagery, orthophotography, DEMs, DSMs, point clouds, contours, and volumetrics
- Accuracy and precision, change detection, and long-term data management

2 | Drone Pilot Certification Prep (FAA Part 107)

Nov 5 & 6, 2026 (alternate: Mar 4 & 5, 2027) Build the knowledge and decision-making skills to earn your FAA Remote Pilot certificate (drone pilot license).

- Part 107 rules and operating limits, airspace classification, LAANC, and sectional chart interpretation
- Aviation weather (METARs and TAFs), human factors, preflight procedures, and emergency response
- Hands-on chart and weather practice, finishing with a full 60-question practice exam and guided review

3 | GPS/GNSS RTK and PPK Mapping and Data Processing

Jan 28 & 29, 2027 Designed for professionals other than licensed surveyors: engineers, geologists, biologists, soil scientists, archaeologists, foresters, and other field-based practitioners. It stands alone as a GNSS course for any application, not just drones.

- Plan a GNSS campaign, set up a base and rover, and conduct a centimeter-level RTK field survey
- Post-process with PPK and PPP, and make sound coordinate system and datum decisions
- Establish ground control and checkpoints, and reoccupy or stake out points in the field
- Quantify and communicate accuracy for drone mapping and for geotechnical, environmental, and engineering projects

4 | Advanced LiDAR and SfM Photogrammetry Data Processing

Feb 18 & 19, 2027 Builds on Workshops 1 and 3. Work with real-world data sets through every step of the SfM photogrammetry and LiDAR (LAS) workflows.

- Integrate GNSS corrections, ground control, and checkpoints; reduce noise in SfM point clouds
- Process and classify LiDAR (LAS) data into engineering-ready and hydrologically conditioned surfaces
- Produce DEMs, DSMs, contours, orthomosaics, and cross-sections, then export to Civil 3D, MicroStation, and ArcGIS Pro
- Verify accuracy with checkpoints and standardized QA/QC reporting

Bundle, Discounts, and Logistics

The complete four-workshop progression takes you from foundational skills to advanced data-processing expertise. Register for the full bundle or for individual workshops. Discounts are available on both, with deeper discounts for multiple registrants, so please reach out for details.

- Format: two full days per workshop, taught by an experienced practitioner, with hands-on exercises and real data
- Location: Missouri S&T St. Louis, 2127 Innerbelt Business Center Drive, Suite 210, St. Louis, MO 63114
- Workshops 1 and 2 can be attended in person or live online via Zoom, with recordings available for 30 days afterward; Workshops 3 and 4 are in person only
- Professional development hours (PDH) are available for each workshop

Your Instructor

Dr. Toby Dogwiler is a professor of geosciences in the School of Earth, Environment, and Sustainability at Missouri State University and holds a Ph.D. in Geological Science from the University of Missouri. He brings more than 25 years of experience in applied water resources and environmental assessment and has been an innovator in drone-based mapping for over a decade. His research group develops drone methods and applies them to real-world environmental projects.

Register or ask about discounts: stl@mst.edu | 573-341-6148

stl.mst.edu/shortcourses/upcomingofferings | Missouri S&T Corporate and Professional Education, St. Louis