Creating and Editing Data with ArcGIS® Pro

STUDENT EDITION

Copyright © 2022 Esri

All rights reserved.

Course version 7.0. Version release date September 2022.

Printed in the United States of America.

The information contained in this document is the exclusive property of Esri. This work is protected under United States copyright law and other international copyright treaties and conventions. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage or retrieval system, except as expressly permitted in writing by Esri. All requests should be sent to Attention: Director, Contracts and Legal, Esri, 380 New York Street, Redlands, CA 92373-8100, USA.

Export Notice: Use of these Materials is subject to U.S. export control laws and regulations including the U.S. Department of Commerce Export Administration Regulations (EAR). Diversion of these Materials contrary to U.S. law is prohibited.

The information contained in this document is subject to change without notice.

Commercial Training Course Agreement Terms: The Training Course and any software, documentation, course materials or data delivered with the Training Course is subject to the terms of the Master Agreement for Products and Services, which is available at https://www.esri.com/~/media/Files/Pdfs/legal/pdfs/ma-full/ma-full.pdf. The license rights in the Master Agreement strictly govern Licensee's use, reproduction, or disclosure of the software, documentation, course materials and data. Training Course students may use the course materials for their personal use and may not copy or redistribute for any purpose. Contractor/Manufacturer is Esri, 380 New York Street, Redlands, CA 92373-8100, USA.

Esri Trademarks: Esri trademarks and product names mentioned herein are subject to the terms of use found at the following website: https://www.esri.com/legal/copyright-trademarks.html.

Other companies and products or services mentioned herein may be trademarks, service marks or registered marks of their respective mark owners.

Table of Contents

Esri resources for your organization

Course introduction

Course introduction
Course goals
Installing the course data
Training Services account credentials
Icons used in this workbook

1 Editing in ArcGIS Pro

Lesson introduction
Editing GIS data
ArcGIS Pro editing workflow
ArcGIS Pro editing environment
App and project settings for editing
Exercise 1: Configure ArcGIS Pro for editing
Start ArcGIS Pro and open a project
Update the default measurement units
Investigate auto-save settings
Change the map's coordinate system
Set layer selectability and editability
Lesson review
Answers to Lesson 1 questions

2 Preparing to edit GIS data

Lesson introduction
Editable features
Exercise 2A: Investigate coordinate systems
Identify map and layer spatial references
Measure the offset between layers
Change the map's x,y coordinate system and add a new layer
Lining up data
Tracking changes in ArcGIS Pro
Exercise 2B: Enable editor tracking on a feature class
View data attributes
Enable editor tracking on a feature class
Make an edit
Lesson review

Answers to Lesson 2 questions

3 Creating 2D features

Lesson introduction

Feature creation workflow

Feature templates

Types of feature templates

Managing feature templates

Choose a construction method

Exercise 3: Create 2D features using feature templates

Open a new project and zoom to a bookmark

Investigate how symbology affects feature templates

Use a feature template to create new geometry

Create attributes for your new feature

Create a preset template

Create a new set of features using a preset template

Lesson review

Answers to Lesson 3 questions

4 Maintaining spatial integrity

Lesson introduction

Snapping

Reference grid

Dynamic constraints

Undo/redo stack

Exercise 4: Use placement tools to create features

Create new features

Undo and redo actions

Prepare the editing environment

Use snapping to create new polygons

Use dynamic constraints and snapping to create a polygon

Add attributes to new features

Lesson review

Answers to Lesson 4 questions

5 Modifying 2D features

Lesson introduction

Evaluate geometry for modification

Feature modification workflow

Modification tools

Exercise 5: Modify existing features

Relocate a point feature

Modify polygon shapes

Continue a line feature

Combine two features

Lesson review

Answers to Lesson 5 questions

6 Editing attributes

Lesson introduction

Managing attributes

Investigate attributes

Using geodatabase schema in attribute edits

Exercise 6: Edit attributes in ArcGIS Pro

Add data to a new map

Investigate attributes

Examine geodatabase schema

Add attributes to a new feature

Update attributes to existing features

Calculate field values

Lesson review

Answers to Lesson 6 questions

7 Using topology

Lesson introduction

Using map topology

Exercise 7A: Use map topology while editing

Enable map topology

Use a topology to modify coincident point and line features

Use a topology tool to eliminate polygon overlaps

Use a topology tool to remove gaps

Geodatabase topology

Comparing map and geodatabase topology

Exercise 7B: Use geodatabase topology to maintain spatial integrity

Investigate topology rules

Validate a topology

Locate errors

Fix a topology error

Mark an error as an exception

Use editing tools to fix an error

Use a predefined fix to correct a data error

Correct topology errors

Revalidate a topology Lesson review Answers to Lesson 7 questions

8 Editing annotation

Lesson introduction

Annotation

Creating annotation

Exercise 8A: Create annotation features

Create feature-linked annotation

Create a new annotation feature class

Create standard annotation

Modifying annotation

Using the Attributes pane to modify annotation

Exercise 8B: Modify existing annotation

Modify annotation position

Edit annotation text

Change text using the Annotation tool

Modify annotation rotation and position

Use vertices to modify annotation features

Lesson review

Answers to Lesson 8 questions

9 Creating and modifying 3D features

Lesson introduction

Points, lines, and polygons in 3D

3D models in ArcGIS Pro

Creating multipatch data in ArcGIS Pro

Exercise 9A: Create a new multipatch feature

Prepare the ArcGIS Pro scene

Sketch a new multipatch feature

Modifying 3D data in ArcGIS Pro

Exercise 9B: Modify multipatch data in ArcGIS Pro

Rotate a 3D feature

Add a new face to an existing multipatch feature

Extrude a multipatch face

Create new faces using interactive guides

Lesson review

10 Implementing the editing workflow

Lesson introduction

ArcGIS Pro editing workflow review Implementing the editing workflow

Comparing the feature creation and modification workflows

Exercise 10: Apply the feature editing workflow

Prepare the editing environment

Modify feature geometry

Create new features

Exercise solution with steps

Lesson review

Answers to Lesson 10 questions

Exercise 10 solution

Appendices

Appendix A: Esri data license agreement

Appendix B: Answers to lesson review questions

Appendix C: Additional resources