



IAAO

INTERNATIONAL ASSOCIATION
of **ASSESSING OFFICERS**

Valuing the World

Course 601 - Cadastral Mapping - Methods and Applications



Course Description

Cadastral Mapping-Methods and Applications is intended to be a continuation of the mapping science curriculum. It exposes students to aspects of protocol and legal principles that are not covered in Course 600.

This course utilizes lectures, classroom discussion and exercises to emphasize the main concepts and procedures taught during the week.

Chapter One covers surveying and judicial protocols for the ownership of property. It also explains the effect of magnetic declination upon the location of property lines. The chapter concludes with the review of simple and reverse curves.

Chapter Two reviews the Public land Survey System utilized in most of the United States of America.

Chapter Three is an in-depth review of Aerial Photogrammetry procedures, the use of LiDAR data and the utilization of oblique photography.

Chapter Four explains the various legal documents that affect ownership and covers principles that Mappers follow in establishing property boundaries.

Chapter Five explains the basics of Geographic Information Systems.



Objectives

Upon completion of this course, you will be able to:

- Develop a fundamental understanding of how base maps are produced, including an overview of aerial photogrammetry.
- Understand the way a global positioning system (gps) relates to aerial photogrammetry.
- Understand how ground technology (surveying techniques) to make the measurements necessary to provide accurate property line locations.
- Describe the survey and disposition of public lands.
- Describe methods for determining areas from maps including: (1) counting coordinate squares, (2) dividing the area into triangles, rectangles, or other regular geometric shapes, (3) digitizing coordinates, and (4) running a planimeter over the enclosing lines.
- Describe datum, or the set of quantities used as a basis to calculate other quantities as it is specially used in mapping, it is a system or set of monuments referred to as a reference surface.
- Understand the interplay of conveyances and other data sources in a mapping project.
- Describe the advantages and disadvantages of using computers in a modern mapping program.

Topic	Time Table	Day Covered
Section 1		
Aerial Photogrammetry	360 Minutes	Monday
Section 2		
Global Positioning System	120 Minutes	Monday
Section 3		
Surveying	150 Minutes	Tuesday
Section 4		
Public Lands	150 Minutes	Tuesday
Section 5		
Area	60 Minutes	Wednesday
Section 6		
North American Datum's	120 Minutes	Wednesday
Section 7		
Conveyances and Other Data Sources	180 Minutes	Thursday
Section 8		
The Use of Computers in Mapping	360 Minutes	Thursday
Section 9		
Metes and Bounds Exercise	360 Minutes	Friday
Exam	120 Minutes	Friday