



INSTITUTO DE  
AGRIMENSORES  
COLEGIO DE INGENIEROS Y AGRIMENSORES DE PUERTO RICO



**Study Group Agenda**  
**29 de julio de 2023**  
**Casa Capitular de Mayagüez**  
**8:00am – 5:00pm**

**FS – Fundamental of Surveying**

*3. Boundary Law and Real Property Principles*

- A. Public records and descriptions (e.g., land descriptions, mineral rights, ownership rights, weighting evidence)
- B. Common law principles (e.g., controlling elements, unwritten rights, adverse possession)
- C. Easements (e.g., granted, implied/prescriptive)
- D. Simultaneous and sequential conveyances
- E. Metes and bounds
- F. PLSS
- G. Water law (e.g., riparian, littoral rights, water marks/levels)
- H. Sources of law (e.g., federal/state/local, administrative, common, citations, legal research)
- I. Encumbrances (e.g., restrictive covenants, mortgages, liens)
- J. Real property law (e.g., deeds, chains of title)

*4. Surveying Principles*

- A. Basic surveying (e.g., horizontal surveys, vertical surveys, understanding of historical methods and instruments, route surveying, magnetic declination)
- B. Geodesy (e.g., spherical trigonometry, geometric, physical, geodetic coordinates, orthometric corrections, convergence, geodetic reductions, gravity modeling, geoid modeling)
- C. Applied geodesy (e.g., datums and datum conversions, latitude/longitude, coordinate transformations, state plane coordinate system [SPCS], map projections, control networks, reduction of observations, deflection of vertical, satellite coordinate systems)

## **PS – Principles and Practice of Surveying**

### *1. Legal Principles*

#### A. Principles of Evidence

1. How to search for data and for physical evidence to evaluate data
2. How to evaluate data
3. Parol evidence
4. Prescriptive rights
5. Adverse possession
6. Acquiescence
7. Controlling elements
8. Easement rights

#### B. Common Law Boundary Principles

1. Historical and current common law principles
2. Riparian and littoral rights
3. Sovereign rights, including both navigable waters and eminent domain
4. Sovereign land grants

#### C. Sequential and Simultaneous Conveyance Concepts

1. Types of conveyances
2. Junior/senior rights
3. Record and physical evidence

#### D. Legal Descriptions for Real Property Transactions

1. Preparation and interpretation of legal descriptions
2. Controlling elements and how they impact the description
3. Unwritten rights and how they impact the description
4. Encumbrances and how they impact the description
5. Easements and how they impact the description

#### E. Evidence for the Perpetuation of the U.S. PLSS