



MANAGING TRANSPORTATION & LAND USE INTERACTIONS (PL-58)

COURSE OUTLINE

DAY ONE

MODULE 1: History and Context

Learning Objective:

- Understand history and foundation for transportation and land use planning today including key federal decisions and actions that have shaped both professions.

1.A HISTORY AND CONTEXT (60 min.)

1.A.1 Colonial America (1630 -1915)

1.A.2 Post World War I (1915-1940)

1.A.3 Post World War II (1940-1970)

1.A.4 Environmental Movement (1970-1990)

1.A.5 Smart Growth and New Urbanism (1990-2006)

MODULE 2: Regulatory Environment

Learning Objective:

- Recognize and appreciate the legal framework and mandates for transportation and land use planning in California.

2.A TRANSPORTATION REGULATIONS (15 min.)

2.A.1 Federal Transportation Regulations

2.A.2 State Transportation Regulations

2.A.3 Local Transportation Regulations

2.B NEW CALIFORNIA REGULATIONS

2.B.1 AB 32

2.B.2 SB 375

2.B.3 SB 97

2.C PLANNING TOOLS

2.C.1 General Plans

2.C.2 Specific Plans

- 2.C.3 Other Plans
- 2.C.4 Zoning

QUESTIONS

DAY TWO

MODULE 3: Transportation Planning Process

Learning Objective:

- Understand the role of various agencies within the planning, design, and construction of transportation facilities
- Learn about the development and implementation of long-range transportation plans
- Understand how geographic scales (regional to local) influence transportation planning

3.A TRANSPORTATION PLANNING PROCESS

- 3.A.1 Transportation Agencies
- 3.A.2 Planning and Development Process
- 3.A.3 Agency Roles

MODULE 4: Transportation Planning Tools

Learning Objective:

- Learn the capabilities of commonly used transportation planning tools including travel models
- Understand the benefits and limitations of travel demand models
- Appreciate the characteristics of integrated land use/transportation tools
- Learn how to best deploy simulation models
- Understand other tools generally used for planning

4.A TRANSPORTATION TOOLS

- 4.A.1 4-Step Models
- 4.A.2 Activity Based Models

- 4.A.3 Transportation Land Use Models
- 4.A.4 Sketch Planning Models
- 4.A.5 Traffic Operations Models
- 4.A.6 Highway Capacity Manual
- 4.A.7 Traditional Traffic Analysis Tools

MODULE 5: Transportation Planning Paradigm Shift

Learning Objective:

- Appreciate current funding constraints
- Understand the changing nature of transportation planning given funding, environmental, and political constraints.
- Learn about current trends in personal travel and demographics
- Understand current thinking regarding induced travel

5.A TRANSPORTATION TOOLS

- 5.A.1 Transportation Funding
- 5.A.2 Planning Paradigm
- 5.A.3 Transportation Land Use Models
- 5.A.4 Change in Travel Behavior
- 5.A.5 Induced Travel

QUESTIONS

DAY THREE

MODULE 6: Sustainability

Learning Objective:

- Learn about sustainability as a new design paradigm
- Understanding Sprawl

6.A THE RISE OF SUSTAINABILITY

- 6.A.1 What is sustainability?
- 6.A.2 What does it mean for transportation?

6.B UNDERSTANDING SPRAWL

- 6.B.1 Its history

6.B.2 Measuring Sprawl

MODULE 7: Emerging Trends and Tools in Land Use Planning

Learning Objective:

- Learn about emerging trends and tools in planning.
- 7.A PUBLIC HEALTH AND THE BUILT ENVIRONMENT
- 7.A.1 Public health trends
 - 7.A.2 Built environment influences
- 7.B WALKABILITY AND THE NEW MODEL NEIGHBORHOOD
- 7.B.1 Form, character and three dimensional plans
 - 7.B.2 Environmental performance
 - 7.B.3 Green design
 - 7.B.4 Protecting the network
- 7.C NEW TOOLS FOR THE NEW PARADIGM
- 7.C.1 Climate Change and Climate Action Plans
 - 7.C.2 Form-based Codes and Plans
 - 7.C.3 Complete Streets

QUESTIONS

DAY FOUR

MODULE 8: New Approaches

Learning Objective:

- Understand Application of Big Data to transportation studies
 - Understand next generation analysis tools
 - Learn about applications of Cloud Computing to transportation
- 8.A TRANSPORTATION TOOLS
- 8.A.1 Data Sources
 - 8.A.2 Applying Big Data to Projects
 - 8.A.3 Next Generation Tools
 - 8.A.4 Mixed-Use Trip Generation
 - 8.A.5 Cloud Computing

MODULE 9: Performance Measures

Learning Objective:

- Learn how to calculate a wide variety of performance measures from data commonly available in most agencies
- Understand how performance measures are used in various planning applications
- Recognize the “bias” in typically used performance measures

9.A TRANSPORTATION TOOLS

9.A.1 Performance Measure Equity

9.A.2 Performance Measure Examples

9.A.3 Caltrans Approach

9.A.4 LOS

9.A.5 Multi-Modal LOS

REVIEW OF MATERIALS IN COURSE MANUAL

QUESTIONS