(PL-14)
Transportation Planning Fundamentals for California Streets

COURSE OUTLINE

Day 1 - Framework for Multimodal Transportation Planning in California

Instructor: Richard Lee

7:30 – 8:00 AM Check-in

8:00 – 9:15 AM **Module 1**

Self-Introductions
Icebreaker
Course Overview
The Multimodal Transportation Planning Process and Legal Framework

- What is comprehensive multimodal transportation planning? Goals, objectives, policies, actions
- Reasons for travel desires
- Intergovernmental relations, legal and institutional framework for multimodal transportation planning in California
- "Complete Streets" concept & requirements; street classification systems
- Land use/ transportation relationships
- Demographics/ transportation relationships
- Role of freight in urban transportation
- Transit-first/ priority policies
-

9:15 – 10:30 AM **Module 2**

Data Collection, Quantitative Analysis, and Travel Forecasts

- Primary data sources: counts, surveys, and inventories
- Secondary data sources (US Census, BTS, etc.)
- Biggest mistakes and pitfalls in data collection
- Types of data measurement: data interpretation and reading charts and tables
- Statistical concepts and definitions
- Visual display of data
- Practical techniques for counting pedestrians and bicyclists
- Travel forecasts: their use, misuse, abuse
- Ethical use of data

10:30 - 10:45 AM Break

10:45 AM – 12:00 N **Module 3**

Environmental Analysis and CEQA New Trends (SB 743)

- Introduction to CEQA: What it is, what it applies to. Why do we have it?
- CEQA vs. NEPA
- Vehicle tailpipe emissions
- Greenhouse gases and the Climate Action Plan (CAP)
- New trends, SB 743 & OPR requirements, and infill development near transit
- Noise impacts of traffic
- Energy consumption of transportation modes
- SB 375: "Sustainable Transportation" and Regional Transportation Planning
- Mitigations: Transportation Systems management(TSM) and Travel Demand Management (TDM)

12:00 – 1:00 PM Lunch (on your own)

1:00 - 2:15 PM **Module 4**

Public Participation & Involvement, Dealing with Controversy

- Why do conflicts over projects occur?
- Communication techniques, including using social media
- What kinds of projects generate the most controversy?
- Practical public participation: Identifying Stakeholders and reaching them using today's social media
- Dealing with NIMBYs: negotiation, mediation, and the role of the transportation professional
- Six things you should never do when dealing with the public

2:15 – 3:30 PM **Interactive Engagement**

We will present a case study of a real-life, multi-agency, transit transfer center. After a presentation and reading on the facts of the case, including proponents' and opponents' arguments, we will break into groups (4-8 students, depending on the size of the class) to discuss the merits of the principal arguments, and to develop alternative solutions to resolve the conflict. Each group will pick a spokesperson to report back the group's collective thinking.

3:30 - 3:45 PM Break

3:45 – 4:45 PM **Module 5**

Evaluation and Prioritization of Multimodal Transportation Projects

- Developing multimodal vision statements, evaluation criteria & measures
- What techniques can I use?
- Comparative economic costs & benefits
- Estimating costs/ cost indexes
- Prioritization techniques

4:45 – 5:00 PM Course evaluation for Day 1

Day 2 - Optimizing Roadway Systems for Mobility and Multimodal Connectivity

Instructor: Rafat Raie

8:00 – 9:15 AM **Module 6**

Freeway Multimodal Considerations

- Optimizing HOT/HOV System for BRT and express bus service
- Real-time traffic management systems
- Integrated corridor management
- Ramp metering and HOV access lanes
- Highway advisory systems

9:15 – 10:30 AM **Module 7**

The New Transit/Multimodal Role for Arterials and Collectors

- Accommodating buses in existing arterials and collectors
- Transit role in communities
- Transit corridors
- Great transit facilities including branding of transit routes
- Transit level of service - HCM 6th Edition
- Discovering transit demand
- Safe Route to Transit for pedestrians and bicyclists

10:30 - 10:45 AM Break

10:45 – 12:00 N **Module 8**

Multimodal Traffic Signals

- Traffic signal basics
- Planning - design - operations
- Timing philosophies, norm setting
- Latest in traffic signal technology

  - Vehicles - real time data and Signal Performance Measures (SPM)
  - Transit - priority
  - Pedestrians - scramble
  - Bicycles - detection and timing
- Permissive treatments impact of pedestrian

12:00 – 1:00 PM Lunch (on your own)

1:00 - 2:15 PM **Interactive Engagement**

Multimodal Auditing Techniques and Walking Tour

- Elements to consider in a field audit
- Walking tour of a specified route and feedback/recommended actions
- Reality check of recommended actions

2:15 – 3:30 PM **Module 9**

Safe and Accessible Pedestrian Design

- ADA overview - It is the law
- Pedestrian master planning
- Pedestrian demand projection tools
- Pedestrian connectivity analysis
- Designing for pedestrians
- Pedestrian treatments evolution
- Uncontrolled intersections and crosswalks
- Latest design treatments
- OTS safety technical assistance from Tech Transfer

3:30 - 3:45 PM Break

3:45 – 4:45 PM **Module 10**

Parking Considerations for Healthy Economic Development

- Off-street parking policy
- Parking design and parking standards
- Parking cost influence on mode choice
- Parking reform practice - shared parking
- Loading/unloading zones
- TDM to offset parking supply and demand

4:45 – 5:00 PM Course evaluation for Day 2

Day 3 - Transforming Walking, Bicycling, and Transit into More Viable Modes
Instructor: Charles Rivasplata

8:00 – 9:15 AM **Module 11**

Residential Streets: Livability and Quality of Life

- Street layouts, cross-sections
- Differences between urban, suburban and "rural feel" contexts
- Importance of connectivity and livability
- Speed limits, speeding, and traffic calming
- Safe Routes to School
- Promoting bicycling and walking on residential streets

9:15 – 10:30 AM **Module 12**

On-Street Bicycling and Bicycle Safety

- Common auto-bike safety issues, and how to use crash data to select best design
- How to accommodate both bikes and surface transit
- Cycle tracks and buffered bike lanes
- Bikes in rural and mountainous areas
- Intersections, roundabouts and bike signal heads
- Bike parking policies and development requirements

10:30 - 10:45 AM Break

10:45AM – 12:00 N **Module 13**

Bicycle Paths

- Differences between shared use paths, lanes, side paths, and cycle tracks
- Key considerations for bike paths to be used as transportation
- Why and how to separate bicyclists and pedestrians on bike paths
- Bike path opportunities and other community objectives, e.g. protection
- Key intersection design elements for a trail crossing a roadway
- How across-barrier connections complete the network

12:00 – 1:00 PM Lunch (on your own)

1:00 - 2:15 PM **Interactive Engagement**

Students will work on the following real-life problem: Given a downtown area with several one-way couplets, develop a strategy to accommodate bicycle modes. Trainees can choose between a set of possible applications, including converting the couplets to two-way streets, installing contraflow bike lanes, installing one-way or two-way cycle tracks on one side of the roadway, or installing bike lanes on the left side of one-way streets, among others.

2:15 – 3:30 PM **Module 14**

Mass Transit Planning Concepts

- Why cities need public transit
- Ways to classify different forms of transit
- Transit, land use context and city size/density
- Transit-specific policies - city and regional level planning and regulation
- Transit fare and payment options
- Best practices - rider information, service options and integration with other modes

3:30 - 3:45 PM Break

3:45 – 4:45 PM **Module 15**

Transit Design & Operational Issues

- Key issues affecting transit travel speeds and delay
- Light rail and streetcar design elements
- BRT essential elements, operations, and design issues
- Subway, commuter rail, and regional rail
- LRT/Rail pedestrian safety
- Course evaluation for the day

4:45 – 5:00 PM Course evaluation for Day 3