



COURSE OUTLINE

Design, Implementation and Operation of Bicycle Facilities (TE-19)

DAY ONE

7:30-8:00 a.m. Sign in

8:00-8:30 a.m. Introductions

8:30-9:45 a.m. Chapter 1 – Background and Context (Tim Bustos)

Learning Objective:

- Recognize the importance of bicycle transportation and how bicycle facilities fit into the larger context of the transportation network

1.A Strategies and policies to increase use.

1. Land use /connectivity
2. Parking policies (e.g. charging for parking)
3. Funding availability
4. Employer incentives
5. Bike parking availability

1.B Overview of bicycle friendly cities in CA,

1. Modal split
2. Proven benefits

1.C Federal and State laws/policies:

1. TEA-21, USDOT Policy (Accommodating Non-Motorized Transportation),
2. NEPA, CEQA
3. Vehicle Code (especially 21960)
4. Street and Highway Code (especially 887 and 888),
5. Deputy Directive 64 (Accommodating Non-Motorized Travel)
6. Concept of Context Sensitive Design (including ITS courses)

1.D The legal definition of bicycle

9:45 – 10:00 a.m. Break

Chapter 2 - Bicycle Facility Design

Learning Objective (for Chapters 2A – 2H):

- Gain the how-to knowledge for designing various classes of bicycle facilities
- Develop insights about good practices, uses and safe operations of bicycle facilities
- Develop insights about integrating bicycles and bicycle facilities into the transportation system

10:00-11:00 a.m. Chapter 2A - Class 1 Bike Paths (Tim Bustos)

- 2A.1 When and where they are appropriate; avoiding conflicts
- 2A.2 User characteristics related to design
- 2A.3 Basic standards: widths, surface material, signing, striping, sight distance, lighting
- 2A.4 Best practices, guidelines and policies and why
- 2A.5 Legal setting related to design: CVC, ADA, etc
- 2A.6 Safety Issues related to design
- 2A.7 Personal safety issues: lighting, patrol and telephones
- 2A.8 Innovations to address legal /safety/ user conflict issues

Student Exercise 1

11:00 – noon Chapter 2B - Class 2 Bike Lane Design (Michelle DeRobertis)

- 2B.1 Bike Lane versus wide curb lane debate
- 2B.2 Safety Issues related to design: including accident statistics
- 2B.3 User characteristics related to design
- 2B.4 Legal setting related to design: CVC, ADA, etc
- 2B.5 Basic standards: widths, surface material, signing, striping
- 2B.6 Best practices, guidelines and policies and why
- 2B.7 Bike Lanes and Right Turn Lanes 2B.8 Innovations to address legal /safety/ user conflict issues

noon-1:00 p.m. Lunch

1:00-2:00 p.m. Chapter 2C - Class 3 and Variations (Michelle DeRobertis)

- 2C.1 Basic standards for a Bike Route
- 2C.2 Wide shoulders
- 2C.3 Wide curb lanes
- 2C.4 Why not sidewalks
- 2C.5 Bicycle Boulevards
- 2C.6 Bicycles on freeways

2:00-3:15 p.m. Student Exercise 2

3:15-3:30 p.m. Break

3:30-4:30 p.m. Chapter 2D - Over/Under Crossings (Tim Bustos)

- 2D.1 When and where they are appropriate; and, overcrossings versus undercrossings
- 2D.2 User characteristics related to design
- 2D.3 Basic standards: signing, striping, grades, clearance, sight distance
- 2D.4 Best practices, guidelines and policies
- 2D.4 Legal setting related to design, including the California Vehicle Code (CVC), the Americans with Disabilities Act (ADA), and others.
- 2D.5 Safety Issues related to design
- 2D.6 Innovations to address legal, safety and user conflicts.

Student Exercise 3

4:30-5:00 p.m.

Questions

DAY TWO

8:00-8:15 a.m.

Questions/ overview/ pass out evaluation forms/collect CEU slips

8:15-9:15 a.m.

Chapter 2E – Integrating Bicycles on All Roadways
(Michelle DeRobertis)

2E.1 Surface interruptions

2E.2 Maintenance

2E.3 Traffic signals

2E.4 Timing

2E.5 Loop detectors and other detection technology

2E.6 Pushbuttons for bike?

2E.7 Innovations to address legal /safety/ user conflict issues

9:15-10:00 a.m.

Chapter - 2F Connectivity of Bike Facilities (Tim Bustos)

Video: Bicycle Signal Heads and The California Traffic Control Devices (CTCDC) Running time approximately 8 minutes

2F.1 Bike path connections

2F.2 To other bike paths

2F.3 To surface streets

2F.2 Bike lane connections

10:00-10:15 a.m.

Break

10:15-11:00 a.m.

Chapter 2G Bike Parking (Tim Bustos)

2G.1 Types of bike racks

2G.2 Quantity

2G.3 Placement – where you put them is everything

2G.4 Policy and design references

11:00-noon

Chapter 2H – Integrating the Bicycle Mode into the Community and Transportation Network
(Michelle DeRobertis)

2H.1 Bicycling as a transportation mode

2H.2 Neo-traditional neighborhoods

2H.3 Routes to school

2H.4 Bikeways on bus routes

2H.5 Traffic Impact Studies

noon-1:00 p.m.

Lunch

1:00 – 2:45 p.m.

Chapter 3 - Bicycle Master Plans
(Michelle DeRobertis and Tim Bustos)

Learning Objective:

- To understand the critical elements that comprise bicycle master plans
- To become familiar with the development of bicycle master plans through case studies

3A. Why a bicycle master plan?

1. Relation to General Plan and Regional Transportation Plans
2. Funding
3. Case studies

3B. Elements to include in a Bicycle Master Plan

1. Required per Bicycle Transportation Account (BTA) Handout
2. Good ideas to include
 - a. Public participation and input: workshops/surveys
 - b. Data collection/Collision analysis/Goals and objectives/Design guidelines/Map for public distribution

3C. Public involvement (*case studies*)

3D. Inter-agency relations (*case studies*)

2:45-3:00 p.m.

Break

3:00-3:45 p.m.

Student Exercise 4

3:45-4:45 p.m.

Chapter 4 – Bicycle Plan Implementation
(Michelle DeRobertis)

Learning Objective:

- Gain knowledge about implementing bicycle plans on existing and new roadways

4.A. Politics

4.B. Prioritization

4.C. Implementing bicycle facilities (*case studies*)

1. Designing bikeways into new roads
2. Retrofitting bikeway facilities in existing roadway network
3. Case studies

4.D. Environmental impacts (handout/other references)

Student Exercise 5

4:45– 5:00 p.m.

Questions and Evaluations