



City & County Pavement Improvement Center Pavement Training for Cities and Counties

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CCPIC Mission and Vision

- **Mission**
 - CCPIC works with local governments to increase pavement technical capability through timely, relevant, and practical support, training, outreach and research
- **Vision**
 - Making local government-managed pavement last longer, cost less, and be more sustainable



City and County Pavement Improvement Center



- Sponsored by the League of California Cities, County Engineers Association of California, and the California State Association of Counties
- Chartered September 28, 2018

- **University of California Partners**
 - University of California Pavement Research Center (lead)
 - UC Berkeley ITS Tech Transfer
- **California State University Partners**
 - CSU-Chico, CSU-Long Beach, Cal Poly San Luis Obispo

CCPIC Organization

- **Governance**
 - Governance Board consisting of 6 city and 6 county transportation professionals
- **Current Funding**
 - Seed funding from SB1 through:
 - Institute of Transportation Studies at UC Davis, UC Berkeley, UC Los Angeles, UC Irvine
 - Mineta Transportation Institute at San Jose State University

CCPIC Scope

- **Technology Transfer:**
 - Training courses
 - Pavement engineering and management certificate program for working professionals through UC Berkeley ITS Tech Transfer
 - Outreach
- **Technical Resources:**
 - Technical briefs, guidance, sample specifications, tools, and other resources
- **Resource Center:**
 - Outreach, questions, pilot study documentation, and forensic investigations
- **Research and Development:**
 - For local government needs that are not covered by State and Federal efforts
 - Adapting work done for state government

Pavement Engineering & Management (PEM) Certificate Program

- **PEM Certificate Program Overview**
 - For engineers, asset managers, upper-level managers, technicians and construction inspectors
 - 88.5 hours of training
 - 56.5 hours in core classes, 32 hours in electives
 - Majority of classes to be offered online
 - In four categories:
 - Fundamentals
 - Management
 - Materials and Construction
 - Design

Pavement Engineering & Management Certificate: Curriculum

	Fundamentals	Hrs	Management	Hrs	Materials and Construction	Hrs	Design	Hrs				
CORE 56.5 required	CCA-01	Introduction to Pavement Engineering and Management	10	CCB-01	Life Cycle Cost Analysis	4	CCC-01	Asphalt Concrete Materials and Mix Design	8			
	CCA-02	Pavement Sustainability	4	CCB-02	Pavement Management Systems and Preservation Strategies	10	CCC-02	Pavement Preservation Treatments, Materials, Construction, Quality Assurance	8			
							CCC-03	Pavement Construction Specifications and Quality Assurance	12.5			
56.5	Fundamentals, CORE		14	Management, CORE		14	Materials and Construction, CORE	28.5	Design, CORE	0		
ELECTIVE 32 required 84 offered				CCB-21	Financing and Cash Flow for Pavement Networks	4	CCC-21	Concrete Materials & Mix Design	8	CCD-21	Asphalt Pavement Structural Section Design	8
				CCB-22	Integrated Asset Management for Multi-Functional Pavements	8	CCC-22	In-Place Recycling	8	CCD-22	Design, Construction, and Maintenance of Interlocking Concrete Pavers	6
							CCC-23	Gravel Roads Engineering, Construction, and Management	8	CCD-23	Concrete Pavement Design	8
							CCC-24	Roadway Construction Phasing, Scheduling, and Traffic Control	4			
							MISC	Classes from Pavement Construction Inspection Certificate curriculum				
							CCC-26	Pavement Construction Management	8			
							CCC-27	Asphalt Pavement Maintenance Construction	6			
							TS-10	Work Zone Safety	8			
84	Fundamentals, ELECTIVE		0	Management, ELECTIVE		12	Materials and Construction, ELECTIVE	50	Design, ELECTIVE	22		
Total for Certificate 88.5 hours	Fundamentals		14	Management		26	Materials and Construction	78.5	Design	22		

Pavement Construction Inspection (PCI) Certificate Program

- **PCI Certificate Program Overview**
 - For engineers, material testing technicians and construction inspectors
 - 80.5 hours of training
 - 68.5 hours in core classes, 12 hours in electives
 - Majority of classes to be offered online

Pavement Construction Inspection Certificate: Curriculum

Core		Hrs	
CORE 68.5 required	PD-01	Construction Inspection	16
	CCI-01	Asphalt Pavement Construction Inspection	4
	CCI-02	Concrete Pavement Construction Inspection	4
	CCI-03	Concrete Street Improvements Construction Inspection	4
	CCI-04	Pavement Preservation Construction Inspection	4
	CCC-02	Pavement Preservation Treatments, Materials, Construction, Quality Assurance	8
	CCC-03	Pavement Construction Specifications and Quality Assurance	12.5
	CCC-26	Pavement Construction Management	8
	TS-10	Work Zone Safety	8
68.5	Core	68.5	
Electives (choose 12 hours from list below)		Hrs	
ELECTIVE 12 required 26 offered	CCC-22	In-Place Recycling	8
	CCC-24	Roadway Construction Phasing, Scheduling, and Traffic Control	4
	CCI-06	Construction Inspection of Asphalt-Rubber Pavement Materials	2
	PD-02	Construction Inspection of Traffic Signals	8
	TS-18	Excavation and Trenching Safety	4
12	Electives	26	
80.5	Total required for certificate		

CCPIC Classes Currently Open for Enrollment

Code	Title	Date	Location
CCB-21	Financing and Cash Flow for Pavement Networks	Anytime	Online (Self-Paced)
CCC-21	Concrete Materials and Mix Design	Anytime	Online (Self-Paced)
CCI-02	Concrete Pavement Construction Inspection	Anytime	Online (Self-Paced)
CCI-03	Construction Inspection of Concrete Street Improvements	Anytime	Online (Self-Paced)
CCI-04	Pavement Preservation Construction Inspection	Anytime	Online (Self-Paced)
CCI-06	Construction Inspection of Asphalt-Rubber Pavement Materials	Anytime	Online (Self-Paced)
CCB-01	Pavement Life Cycle Cost Analysis: The Basics	February 11 - 12, 2025	Online
CCC-03	Pavement Construction Specifications and Quality Assurance	March 5 - 6, 11 -13, 2025	Online
CCA-02	Pavement Sustainability	May 20 - 22, 2025	Online

Prepaid Training Packages

- **TechTransfer** now offers a streamlined way for agencies to purchase CCPIC certificate training packages for employees. ***Agencies can purchase a prepaid training package for employees to complete an entire certificate program for \$2,110 per person.*** This price covers all core classes and electives to complete either the Pavement Engineering and Management Certificate or the Pavement Construction Inspection program. Funds never expire, are fully transferable within the agency, and can be applied to any class offered by TechTransfer, so even though they are non-refundable, there's no risk that training funds will be lost if an employee is reassigned or leaves the agency or if training needs change. Training packages are not eligible for group discounts.

For more information, email Registrar@TechTransfer.Berkeley.edu.

Summary of Technical Resources

CCPIC website: www.ucprc.ucdavis.edu/ccpic

Best Practices & Tech Briefs

Answers to common problems

- [Writing and Enforcing Specs for Asphalt Compaction](#)
- [Writing Concrete Specs for Durability and Sustainability](#)
- [Unpaving to Create Affordable, Safe, Smooth Gravel Roads](#)
- [Pavement Condition Index \(PCI\)](#)

Training Classes

Pavement Training

- [About CCPIC subsidized training](#)
- [Currently offered training classes](#)
- [Subscribe to monthly training update emails](#)
- [Survey on your Agency's pavement training needs. Thanks.](#)

Outreach - Presentations

For Viewing and Downloading

- [Pavement Financial and Environmental Sustainability, Some Best Practices-Technical Advisory Committee, Transportation Agency for Monterey County, March 4, 2021.](#)
- [Pavement Financial and Environmental Sustainability, Some Best Practices, California Asphalt Pavement Association, October 7, 2020.](#)

Sample Specifications

Model Specs

- [Superpave HMA for Local Government Model Specification Language](#)
- [Asphalt Compaction Model Specification Language](#)
- [Concrete Pavement Model Specification Language](#)
- [Tack Coat Model Special Provisions](#)

Guidance

Helpful Documents

- [Chemical Dust Control and Stabilization Treatments on Unpaved Roads](#)
- [Stabilization of Subgrade Soils](#)
- [Guide for Partial-and Full-Depth Pavement Recycling in California](#)
- [Use of RAP in Gap-Graded Asphalt Rubber Mixes](#)
- [Asphalt Concrete Reinforced with](#)

Tools

Pavement Software Tools

- Life Cycle Cost Analysis Comparison Spreadsheet & ChangeLog ([Download](#))
- Unpaved Road Chemical Treatment Selection [Website](#)
- Asphalt Paving Compaction Temperature ([Download & Install](#))

Contact

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