

Training Curriculum



Visit the *McTrans* website to register for or arrange a course in your area.

Highway Capacity Analysis *(two or three days)*

This course has been developed for transportation professionals interested in the latest updates and software applications to the HCM 2010. In addition to a general overview of the HCM 2010 highlighting the changes, each procedure will be presented to provide step-by-step instruction on the new HCM 2010 methodologies followed by workshops using examples and demonstrating the *HCS 2010™* application. (The three-day course is hands on.) 12/18 PDH

Intersection Capacity Analysis *(one or two days)*

This course has been developed for transportation professionals interested in the latest updates and software applications to the HCM 2010 for signalized, stop-controlled and roundabout intersections, as well as urban streets and interchange ramp terminals. Each procedure will be presented to provide step-by-step instruction on the new HCM 2010 methodologies followed by workshops using examples and demonstrating the *HCS 2010* application. (The hands on course is a day and a half.) 6/9 PDH

Traffic Engineering Fundamentals *(two or three days)*

This course is aimed at non-traffic engineers or technicians, but engineering and planning professionals who regularly interface with traffic engineering or are new to the discipline. The workshop is intended to introduce several traffic engineering

topics with some practical application for each. The workshop is designed to offer both lecture and computer demonstrations for an introduction to various topics. Videos and slide presentations are used to provide background information. 12/18 PDH

CORSIM™ for Beginners *(two days)*

This course will provide lectures on traffic flow theory, and hands-on software applications using the FHWA Traffic Software Integrated System (TSIS). Version 6 of TSIS implements arterial and freeway simulation in a Windows environment, which includes the TRAFED graphical input editor and the TRAFVU animation module. Each lecture will include software demonstrations and opportunities for students to use different components or modules of the software. (Hands on) 12 PDH

Webinar Series Schedule

October 6	HCM 2010 and <i>HCS 2010</i> Overview
October 7, 8 & 9	HCM Chapters 16, 17, 18 & 22 and <i>HCS 2010</i> Signalized Intersections (Multiple-Period Analysis, Phase Duration) Urban Streets (Flow Profile, Access Points) and Interchanges
October 10	HCM Chapters 19, 20 & 21 and <i>HCS 2010</i> Unsignalized Intersections (TWSC, AWSC, Roundabouts)
October 21 & 22	HCM Chapters 10, 11, 12 & 13 and <i>HCS 2010</i> Freeway Segments (Basic, Weaving, Merge & Diverge, Facilities)
October 23	HCM Chapters 14 & 15 and <i>HCS 2010</i> Highway Segments (Multilane Highways, Two-Lane Highways)

Access Management *(two days)*

This course covers the latest access management design principles, techniques, retrofit programs, legal implications, and design guidelines. Included in the materials will be examples of State Highway Codes and procedures for estimating the potential benefits from an access management program. Impacts on the business community will also be discussed. The course covers median design, driveway spacing, corner clearances, interchange spacing, intersection functional areas, and driveway design. A series of short workshops are included in the course material. 12 PDH

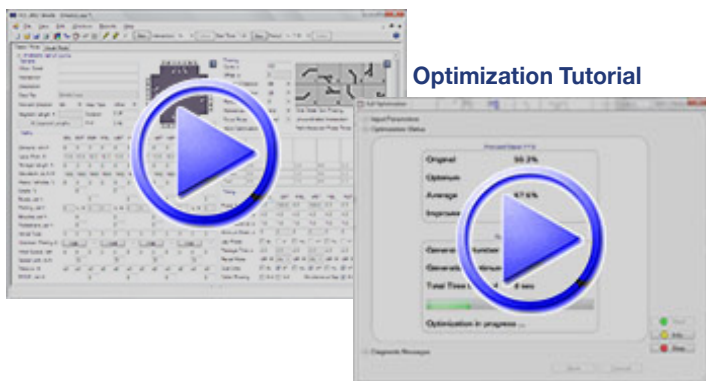
Site Impact Analysis *(two days)*

This course covers the latest techniques for estimating the impacts of both small and large developments. Included in the materials are the ITE Trip Generation Report and the ITE steps for conducting a traffic impact analysis study. The course includes, developing study boundaries, forecasting years, background traffic estimates, trip generation, trip distribution, mode trip analysis, assignment, levels of service analysis, site circulation, and potential mitigation measures. The workshops will be conducted manually but site impact software will be demonstrated. 12 PDH

Signal Warrants *(one day)*

This course covers the nine signal warrants in the MUTCD. Each warrant is reviewed and shown how to interpret and explain how to apply to real life situations. The participants are led in a discussion of the advantages and disadvantages of signalization and potential non-signalized solutions for improving an intersection's operations. Class teams are formed and a workshop is held to take field data and evaluate a sample intersection to determine if any of the intersection warrants are met. The HCS warrant analysis program is applied to the class program and demonstrated to the class. 6 PDH

Streets Tutorial



Basic Signal Operations *(one day)*

This course covers traffic signal operations, including equipment functions, signal systems, control options, phasing design, and coordinated timing. The agenda includes sessions on control equipment and functions; centrally controlled signal systems overview; pretimed and actuated signal operations; and general intersection phasing and timing; signal timing parameters, including cycle, phase, interval, split and offset definitions; and phasing options, NEMA standards, controller settings (minimum, extension, maximum, passage, recall, etc.). Signal timing procedures begin with underlying theory (flow ratios and cycle length), move onto change and clearance (yellow and all-red) interval computations, and conclude with coordination techniques like time-space diagrams and software applications. 6 PDH

Designing for Vulnerable Road Users *(two days)*

Vulnerable road users (VRU) are susceptible to traffic injuries and fatalities, perhaps more so than drivers. Yet we design highways for the mobility of cars sometimes neglecting the needs of the most vulnerable, such as pedestrians, bicyclists, motorcyclists, transit users and others. This course will teach participants how to diagnose pedestrian (and other VRU) safety deficiencies and select the appropriate countermeasures to make conditions safer for all users including an overview of the American with Disabilities Act (ADA) accessibility requirements. Engineering countermeasures will be emphasized but education and enforcement countermeasures will also be covered. 12 PDH

QuickZone *(one day) Coming Soon*

This class provides an overview of the QuickZone work zone estimation software to provide analysts with a quick and easy-to-use tool for the estimation of queue lengths and user delay for freeway and arterial work zones. Travel demands by time of day can be entered as well as facility capacities associated with networks representing both the before roadwork phase and the during roadwork phase of a project. QuickZone analyzes the impact of multiple bottlenecks through the work zone, and assesses congestion impacts associated with the work zone as well as recurrent congestion. The tool allows for rapid "what-if" assessment of alternative traffic control strategies. 6 PDH

Did you know there are two *HCS 2010* tutorial videos to assist users in coding a signalized intersection and setting up an optimization run in Streets?