Intelligent Transportation Systems Joint Program Office (ITS JPO)

ITS Professional Capacity Building Program

What's New

Added to T3 Archive
- Keep It Real: Real-Time Transit Traveler Information Systems - 511, Social Media, and More (presented on June 13, 2013)

Upcoming CITE Courses
- Principles and Tools of Road Weather Management
- Road Weather Information Systems (RWIS) Equipment and Operations
- Managing High Technology Projects in Transportation / ITS Project Management
- Introduction to Systems Engineering

Always Available
- ITS Architecture Use and Maintenance Training

Photo Source: CITE

U.S. Department of Transportation

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U.S. Department of Transportation (USDOT) Releases Advanced ePrimer on Intelligent Transportation Systems (ITS)

The USDOT has released a new, advanced, web-based textbook on intelligent transportation systems, the *ITS ePrimer*. This electronic resource provides transportation professionals, educators, students, and others with a series of up-to-date, web-based modules describing key ITS topics, with a multi-modal perspective.

The *ITS ePrimer* replaces the *Intelligent Transportation Primer* first published in 2000 in collaboration with the Institute of Transportation Engineers (ITE) and ITS America. Public and private agencies and educational institutions widely used the primer to provide information to practicing professionals and students on ITS planning, design, deployment, and operations. However, significant technological advances as well as innovations in educational technology and delivery led to a complete overhaul of the original primer. The new, Internet-based version offers an innovative way of delivering complex information, enabling interactive content via video and web links, easy access by the audience, and timely updates and additions.

The ePrimer includes several chapters, or modules, exploring the various areas within ITS. Each chapter was written by authors actively engaged in the development and deployment of ITS, providing the primer with different and broad transportation perspectives. Topic areas include:

- Introduction to ITS
- Systems Engineering
- Transportation Management Systems
- Traffic Operations
- Personal Transportation
- Freight, Intermodal, and Commercial Vehicle Operations
- Public Transportation
- Electronic Toll Collection and Pricing
- Supporting ITS Technologies
- Rural and Regional ITS Applications
- Sustainable Transportation
- Institutional Issues
- Connected Vehicles
- Emerging Issues.

Each module includes multimedia samples. Educators can use the modules as segments in class, tailoring them to fit their needs.

A team including the USDOT ITS JPO, Federal Highway Administration, Federal Transit Administration, ITE, and ITS America led the development of the *ITS ePrimer*. Several individual modules are available now on the ITS PCB website. The rest of the modules will be available by the end of the year (PowerPoint versions are available now for these modules).

For more information, visit **www.pcb.its.dot.gov/ePrimer.aspx**.
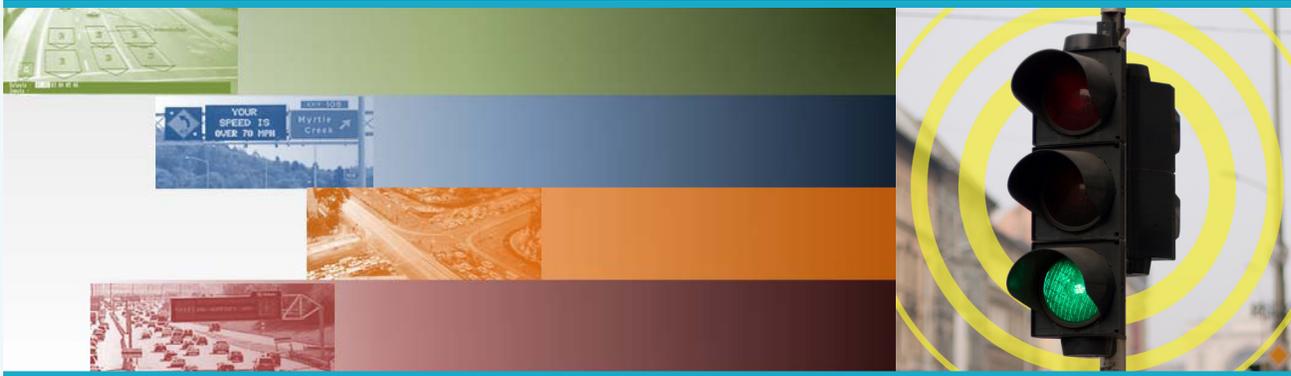
ITS Case Study in Adaptive Signal Control Technology Available for Free to Use in University-level Civil Engineering Studies

The PCB Program is investing in the future of ITS professionals. The program has developed a new educational resource—the ITS Case Study—aimed at building the skills of the next generation of ITS practitioners. The first such case study focuses on adaptive signal control technology and is available now free of charge on the PCB Website.

North Carolina State University successfully piloted the first case study during its undergraduate Traffic Engineering course taught by Professor Billy Williams. The case study includes an instructor lecture, student guide, take-home homework assignment, and in-class debriefing material for the homework assignment.

Professor Williams implemented the case study near the end of the semester for this course, which was the first introduction to transportation engineering for most of the students enrolled. While adaptive signal control is an advanced technology that was not familiar to most students, the context of driving through signalized intersections along urban streets is a very familiar situation for them. The case study's scenario near a university was also easily relatable to the students.

Professor Williams noted that one of the case study's greatest benefits is providing the students with a glimpse of their future professional life and the challenges and issues they will face.

Some of the student's comments regarding the case study pilot include:

- "Gaining knowledge about the ITS problem solving process was very positive."
- "The homework assignment gave me an interesting glimpse into the real-world work experiences."
- "The case study gave me the opportunity to put myself in the shoes of an entry level engineer."
- "I learned how agencies approach transportation projects and how technical issues are assessed, delegated, and solved."
- "It gave a great insight into the average requests made of an entry level engineer."

Professor Williams will continue to use the case study in his transportation engineering courses at North Carolina State University. It is adaptable as an individual or group assignment.

A second case study on the National ITS Architecture will be available soon.

For more information, visit **www.pcb.its.dot.gov/casestudies/default.aspx**.

PCB Program Partner Spotlight: The Consortium for ITS Training and Education (CITE)

CITE is a unique organization of universities and industry associations that provides advanced transportation training and education to transportation professionals and college/university students. CITE offers over 30 interactive web-based courses including full-semester courses, independent-study courses, and blended (combination of instructor-led and online) courses, as well as four certificate programs.

Since October 1999, the PCB Program has partnered with CITE to provide advanced, flexible, just-in-time training to the ITS community. The partnership aims to enhance the state of the practice in ITS by providing training related to the latest programmatic, technical, and management advances in the ITS industry. As part of this partnership, CITE develops and updates courses for the PCB Program, as well as promotes the training and its benefits to a broad transportation audience. The partnership expands the audience for ITS training, increases the number of students enrolling, and enables the PCB Program to reach college/university students entering the ITS workforce.

Throughout the partnership, CITE has developed several advanced transportation courses including Introduction to the National ITS Architecture, Managing High Technology Projects in Transportation, Introduction to Systems Engineering, Improving Highway Safety with ITS, Principles and Tools of Road Weather Management, Configuration Management, Weather Responsive Traffic Management, and Road Weather Information Systems Equipment and Operations.
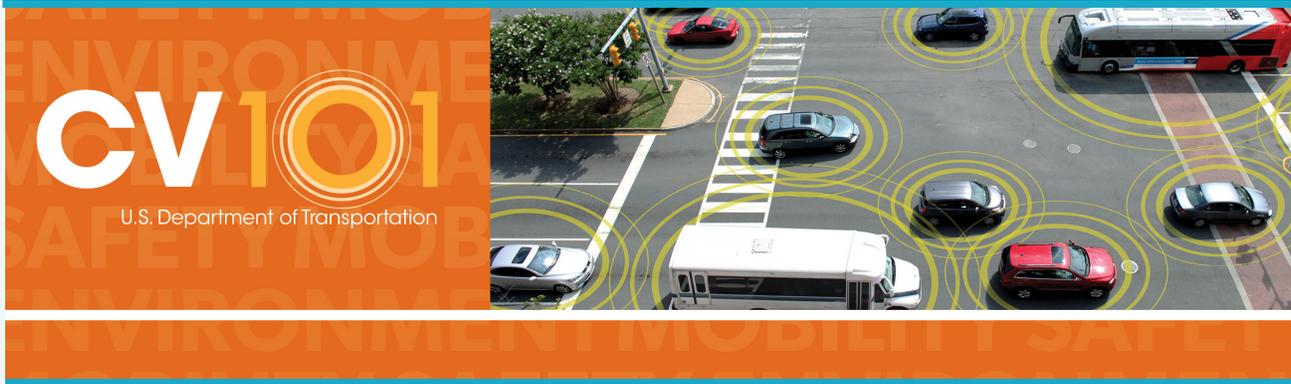
CERTIFICATE PROGRAMS

CITE's advanced transportation certificate programs consist of six short courses bundled by topic area. The four programs currently available include:

- ITS Project Management
- Traffic Engineering and Operations
- Road Weather Management
- ITS Systems.

Each certificate program requires the completion of three core courses, two electives, and one bonus course. Students have a year to complete the courses. Upon completion of the certificate program, students receive a certificate as well as CEUs certified from the University of Maryland.

As with all course offerings that are part of CITE's comprehensive curriculum, the certificate program is **FREE** for U.S. local, state, regional, metropolitan, and federal government agencies. To receive access to the free courses, agencies should use Registration Sponsor Code **PCB** on their registration form.

CITE and the PCB Program are currently working on a new certificate on performance measures that is planned to be released by the end of next year.

In 2011, to further build the professional capacity needed to support deployment of ITS infrastructure, the PCB Program began sponsoring unlimited **FREE** courses through CITE to local, regional, metropolitan, and federal government agencies. This offering has been an overwhelming success—enrollments doubled within one year of implementing the free access. Moreover, enrollments to date have increased to six times their level before the enhanced partnership.

CITE students receive continuing education units (CEUs) from the University of Maryland for successful completion of their training courses. CEUs can be converted to professional development hours. Students who take courses through CITE University Partners earn credits towards a degree.

To receive access to the free courses, agencies should use Registration Sponsor Code **PCB** on their registration form.

For more information, visit **www.citeconsortium.org**.

State Chapter Training: Bringing Knowledge and Information to the State and Local Public Sector

The PCB Program has partnered with ITS America to offer training to ITS state chapters. The partnership enables state and local public sector practitioners to access training on some of today's most relevant and forefront ITS issues.

The State Chapter Training first became available in 2011. Since that first year, the program has grown substantially, increasing its participation levels from an average of 25 attendees to 45 attendees and its training offerings from 6 to 13 courses per year. Courses offered in the past have included:

- Road Weather Information Systems Applications and Future Trends
- Introduction to Systems Engineering
- ITS Standards
- ITS Procurement
- Introduction to Integrated Corridor Management Deployment
- Improving Highway Safety with ITS
- Connected Vehicle 101.

The most popular course this year has been Connected Vehicle 101, which is one of the USDOT's most prominent initiatives due to the technology's potential to greatly improve the safety and mobility of our nation's transportation system. The course has been requested by about half of the state chapters so far. Improving Highway Safety with ITS is also a popular topic.

As part of the partnership, ITS America handles the outreach to and coordination with the state chapters as well as the logistics for the training workshops. Most of the workshops are held at local departments of transportation (DOTs) or transportation management centers to reduce costs.

In addition to personal development hours or continuing education units, the program offers local public sector professionals the opportunity to receive training and information about the USDOT's latest activities and critical issues in the ITS industry, as well as network with other DOT employees, during a time of budgetary constraints and travel restrictions. The training program brings the knowledge and information to the state chapters.

For more information, visit **www.pcb.its.dot.gov/program_overview.aspx**.

Talking Transportation Technology (T3) Archives

Have an ITS issue or topic that you'd like to hear more about, but no time to fit a webinar in your busy schedule? The PCB Program's T3 Archives can help. The archives contain over 60 recordings of past T3 Webinars as well as links to ITS-related webinars produced by PCB partners. The webinars offer real-world examples and lessons learned from agencies that have deployed or are deploying ITS technologies nationwide.

The archives are available at any time and are a great way to get up to date quickly on current ITS issues. With multiple providers contributing, including the National Transportation Operations Coalition (NTOC) and ITS America, the archives provide a single resource for a broad range of ITS topics. They focus on foundational ITS topics across multiple modes such as ITS architecture, systems engineering, and electronic payment and pricing.

Each webinar archive consists of:

- Audio playback
- Presentations delivered in the webinar
- Transcript of the webinar's question and answer discussion
- Webinar announcement, containing the description, learning objectives, and biographies of presenters.

The PCB Program is also looking toward expanding its webinar offerings to include a new roundtable format. These smaller roundtable webinars would focus on more-specific ITS issues, and webinar participants would come to the webinar prepared to discuss relevant questions or concerns. The program is currently piloting this new roundtable format with an integrated corridor management webinar.

For more information, visit **www.pcb.its.dot.gov/t3_archives.aspx**.