

Highway Safety Manual Training Resources

As of January 6, 2012

Name	Resource Type	Duration	Audience	Difficulty Level	Description	Cost	Contact
HSM Lite – Option 1	Instructor Led Training Course or Live Webinar	90 minutes	Local or State transportation agencies	Basic	Provides a snap shot of highway safety statistics, a brief introduction to the AASHTO Highway Safety Manual and shows how safety can be incorporated into practice through proven safety countermeasures and low cost safety improvements.	<ul style="list-style-type: none">• Instructor led training - travel costs plus printing of materials• Webinar – no cost	Hillary N. Isebrands, P.E. hillary.isebrands@dot.gov Office: 720-963-3222
HSM Lite – Option 2	Instructor Led Training Course	½ to ¾ day	Local or State transportation agencies	Basic	Provides a snap shot of highway safety statistics, a brief introduction to the AASHTO Highway Safety Manual and shows how safety can be incorporated into practice through proven safety countermeasures and low cost safety improvements. Examples and case studies applying the Highway Safety Manual principles and techniques, including Crash Modification Factors (CMFs), will also be presented.	Travel costs plus printing costs	Hillary N. Isebrands, P.E. hillary.isebrands@dot.gov Office: 720-963-3222
HSM Lite and Practitioners Guide Blended Workshop – Option 1: Urban and Suburban Roadway Practitioners Guide	Instructor Led Training Course	1 to 2 days	Local or State transportation agencies	Intermediate	<ul style="list-style-type: none">• Provides a snap shot of highway safety statistics, a brief introduction to the AASHTO Highway Safety Manual and shows how safety can be incorporated into practice through proven safety countermeasures and low cost safety improvements. (This can be a stand-alone portion to which decision makers, planners, other transportation professionals can be invited to attend without staying for the reminder of the workshop.)• Workshop participants will apply Highway Safety Manual predictive equations for urban, suburban roadway segments and intersections. Each module will be accompanied with an exercise for the participants to get hands on experience with the HSM.• Case studies (local) applying the HSM will be presented and reviewed with the participants.	Travel costs plus printing costs	Hillary N. Isebrands, P.E. hillary.isebrands@dot.gov Office: 720-963-3222 Or Gene Amparano gene.amparano@dot.gov (816) 329-3909

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HSM Lite and Practitioners Guide Blended Workshop – Option 2: Rural 2-Lane/Multilane Roadway Practitioners Guide	Instructor Led Training Course	1 to 2 days	Local or State transportation agencies	Intermediate	<ul style="list-style-type: none">Provides a snap shot of highway safety statistics, a brief introduction to the AASHTO Highway Safety Manual and shows how safety can be incorporated into practice through proven safety countermeasures and low cost safety improvements. (This can be a stand-alone portion to which decision makers, planners, other transportation professionals can be invited to attend without staying for the remainder of the workshop.)Workshop participants will apply Highway Safety Manual predictive equations for rural, 2 lane and multilane roadways and intersections. Each module will be accompanied with an exercise for the participants to get hands on experience with the HSM.Case studies (local) applying the HSM will be presented and reviewed with the participants.	Travel costs plus printing costs	Hillary N. Isebrands, P.E. hillary.isebrands@dot.gov Office: 720-963-3222 or Gene Amparano gene.amparano@dot.gov (816) 329-3909
HSM Webinar Series	On-Line, Pre-recorded Webinars (Recorded in Summer of 2010)	2 hours each – 24 hours total	Local or State transportation agencies	Depends on module (see listing in next column)	<p>Two hour segments produced in 2010 by the FHWA Resource Center. The following is a complete listing of the modules:</p> <ul style="list-style-type: none">HSM Introduction and OverviewApplication to Two-Lane Rural RoadsApplication to Urban/Suburban IntersectionsProject IdentificationApplication to Rural Two-Lane IntersectionsApplication to Rural Multilane HighwaysApplications to Urban/Suburban RoadsApplications to Rural Multilane IntersectionsHSM and PedestriansApplications to Horizontal CurvesHSM Relationship to Roadway Departure CrashesApplications to HSIP	No cost	Available on internet at: http://www.highwaysafetymanual.org/Pages/FHWAResourceCenterHSMWebinarSeries.aspx

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Highway Safety Manual Lite (HSM Lite) - Common Sense Safety Measures Online Webinar	On-Line, Pre-recorded Webinar (Recorded July 2011)	2 hours	Local or State transportation agencies	Basic	Provides a snap shot of highway safety statistics, a brief introduction to the AASHTO Highway Safety Manual, and shows how safety can be incorporated into practice through proven safety countermeasures and low cost safety improvements.	No cost	Available on the internet at: http://fhwa.adobeconnect.com/p2k74n6ltqv/
HSM Roadway Safety Management Process	Instructor Led Training	1 day	Local or State transportation agencies	Intermediate	Focuses on the Roadway Safety Management Process (Part B) in the HSM and covers topics on Network Screening, Crash Diagnosis, Selecting Safety Countermeasures, Economic Appraisal, and Safety Evaluation. The target audience is for transportation professionals involved with corridor analysis in identifying roadway segments and/or intersections that have the high potential to reduce the frequency or severity of crashes by implementing specific safety countermeasures.	Travel costs plus printing costs	Gene Amparano gene.amparano@dot.gov (816) 329-3909
HSM Overview Course	Instructor Led Training	1 day	Local or State transportation agencies	Basic	This is a new 1-day NHI workshop that provides an overview on all four Parts (A through D) of the HSM: Part A – Introduction, Human Factors, and Fundamentals, Part B – Roadway Safety Management Process, Part C – Crash Prediction Methods, and Part D – Crash Modification Factors are presented. This workshop provides a general overview of the HSM and the target audience is for those who want to become familiar with the HSM content but are not directly involved in applying the crash prediction methodology.	Travel costs plus printing costs	Dave Engstrom, dave.engstrom@dot.gov (708) 283-3545 or Gene Amparano gene.amparano@dot.gov (816) 329-3909
NHI Course - Highway Safety Manual Practitioners Guide for Geometric Design Features (380070)	Instructor Led Training	2 days	Local or State highway engineers	Advanced	This course includes both 2-lane and multi-lane highways and provides a proven methodology for the safety performance of geometric design decisions in a like manner to that of predicting capacity and level of service based upon large scale definitive research. The crash prediction models for total crashes and cross-section related crashes based upon lane width, shoulder width, roadside hazard, traffic volume (exposure) and other characteristics are presented. Examples of safety performance prediction are presented for highway segments and intersections.	\$400 per participant –20 participants minimum	More information available on the internet at: http://www.nhi.fhwa.dot.gov/training/course_detail.aspx?num=FHWA-NHI-380070&cat=&key=highway%20safety%20manual&num=&loc=&sta=%25&typ=&av

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					<p>Discussion of research and the interactive effects of lane and shoulder widths, hazard rating, and access density (driveways) on safety performance are presented. Each student receives a copy of the "Safety Effects of Highway Design Features" manual.</p> <p>IMPORTANT: Participants should bring a scientific notation calculator as the course involves calculating decimal value to decimal power for crash prediction values.</p>		a=&str=&end=&tit=&lev=&drl=
NHI Course - Highway Safety Manual Practitioners Guide for Two-Lane Rural Highways (380070A)	Instructor Led Training	1 day	Local or State highway engineers	Advanced	<p>This course provides a proven methodology for the safety performance of geometric design decisions in a like manner to that of predicting capacity and level of service based upon large scale definitive research. The crash prediction models for total crashes and cross-section related crashes based upon lane width, shoulder width, roadside hazard, traffic volume (exposure) and other characteristics are presented. Examples of safety performance prediction are presented for highway segments and intersections.</p> <p>Discussion of research and the interactive effects of lane and shoulder widths, hazard rating, and access density (driveways) on safety performance are presented. Each student receives a copy of the "Safety Effects of Highway Design Features for Two-Lane Rural Highways" manual.</p> <p>IMPORTANT: Participants should bring a scientific notation calculator as the course involves calculating decimal value to decimal power for crash prediction values.</p>	\$300 per participant – 20 participants minimum	More information available on the internet at: http://www.nhi.fhwa.dot.gov/training/course_detail.aspx?num=FHWA-NHI-380070A&cat=&key=highway%20safety%20manual&num=&loc=&sta=%25&typ=&va=&str=&end=&tit=&lev=&drl=

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NHI Course - Highway Safety Manual Practitioners Guide for Multilane Highways (380070B)	Instructor Led Training	1 day	Local or State highway engineers	Advanced	<p>This course provides proven methodology for the safety performance of geometric design decisions for multilane highways in a like manner to that of predicting capacity and level of service based upon large scale definitive research. The crash prediction models for total crashes based upon lane width, shoulder width, roadside hazard, traffic volume (exposure) and other characteristics are presented. Examples of safety performance prediction are presented for highway segments and intersections.</p> <p>Discussion of research and the interactive effects on safety performance for median width and barriers, of access (driveways) and side streets and intersection turning lanes are presented. Each student receives a copy of the "Safety Effects of Highway Design Features" manual.</p> <p>IMPORTANT: Participants should bring a scientific notation calculator as the course involves calculating decimal value to decimal power for crash prediction values.</p>	\$300 per participant – 20 participants minimum	More information available on the internet at: http://www.nhi.fhwa.dot.gov/training/course_detail.aspx?num=FHWA-NHI-380070B&cat=&key=highway%20safety%20manual&num=&loc=&sta=%25&typ=&ava=&str=&end=&tit=&lev=&drl=
NHI Course - Highway Safety Manual Practitioners Guide for Horizontal Curves (380088)	Instructor Led Training	1 day	Local or State highway engineers	Advanced	<p>This course provides participants with some tools for evaluating the safety performance of horizontal curves along with suggestions for countermeasures that could improve safety performance. Topics covered in this course include the size and magnitude of the problem, tools for identifying and prioritizing horizontal curve safety, low cost maintenance countermeasures, and a discussion of engineering countermeasures.</p>	\$300 per participant – 20 participants minimum	More information available on the internet at: http://www.nhi.fhwa.dot.gov/training/course_detail.aspx?num=FHWA-NHI-380088&cat=&key=highway%20safety%20manual&num=&loc=&sta=%25&typ=&ava=&str=&end=&tit=&lev=&drl=

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NHI Course - Using Interactive Highway Safety Design Model (IHSDM) (380100)	The new delivery format consists of 4 hours of self-paced, web-based trainings and four 2-hour sessions of virtual, instructor-led trainings, known as web-conference training.	12 hours	Local or State highway project managers, planners, designers, and traffic and safety reviewers	Advanced	<p>The Interactive Highway Safety Design Model (IHSDM) is a suite of software tools that quantitatively analyze and evaluate safety and operational effects of geometric design decisions on two-lane rural highways. FHWA expanded the IHSDM Crash Prediction Module (CPM) in 2010 to implement The Highway Safety Manual's Part C (Predictive Method), which highlights predictive methods for estimating the expected average crash frequency of a network, facility, or individual site. The IHSDM contains six evaluation modules: Crash Prediction, Policy Review, Design Consistency, Intersection Review, Traffic Analysis, and Driver/Vehicle.</p> <p>The IHSDM course is a highly-interactive training that gives participants the opportunity to use the actual IHSDM software tools to evaluate and analyze real highway designs. NHI recently updated the delivery format and training materials for the course. The training materials were updated to reflect the expanded CPM. The new delivery format consists of 4 hours of self-paced, web-based trainings and four 2-hour sessions of virtual, instructor-led trainings, known as web-conference training.</p>	\$125 per participant – 5 participants minimum	More information available on the internet at: http://www.nhi.fhwa.dot.gov/training/course_detail.aspx?num=FHWA-NHI-380100&cat=&key=highway%20safety%20manual&num=&loc=&sta=%25&typ=&ava=&str=&end=&tit=&lev=&drl=
NHI Course - Highway Safety Manual Practitioners Guide for Intersections (380105)	Instructor Led Training	1 day	Local or State highway engineers	Intermediate	<p>The new Highway Safety Manual is the state of the art "toolbox" for the "science of safety" for the analysis and prediction of crash frequency for highways and streets. The HSM reflects the evolution in safety analysis from descriptive methods to quantitative, predictive analyses.</p> <p>The Highway Safety Manual (HSM) provides analytical tools and techniques for quantifying the potential effects on crashes as a result of decisions made in planning, design, operations, and maintenance. A universal objective is to reduce the number and severity of crashes within the limits of available resources, science, and technology, while meeting legislatively mandated priorities. The information in the HSM is provided to assist agencies in their effort to integrate safety</p>	\$300 per participant – 20 participants minimum	More information available on the internet at: http://www.nhi.fhwa.dot.gov/training/course_detail.aspx?num=FHWA-NHI-380105&cat=&key=highway%20safety%20manual&num=&loc=&sta=%25&typ=&ava=&str=&end=&tit=&lev=&drl=

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					<p>into their decision-making processes. The HSM is intended to be a resource document that is used nationwide to help transportation professionals conduct safety analyses in a technically sound and consistent manner thereby improving decisions made based on safety performance.</p> <p>This course introduces practitioners at the state, county, metropolitan planning organization (MPO), or local level to the new techniques and knowledge in the HSM. The users and professionals described above include, but are not limited to transportation planners, highway designers, traffic engineers, and other transportation professionals who make discretionary road planning, design and operational decisions.</p>		