Hot Mix Asphalt

SHORT COURSES

- **Asphalt Technology**
  February 26-March 2, 2007

- **SUPERPAVE Volumetric Mix Design**
  March 26-29, 2007

- **Professor Training Program in Asphalt Technology**
  June 19-28, 2007

[www.ncat.us](http://www.ncat.us)
Overview
This course is designed for engineers, technicians and others who require a basic understanding of all phases of Hot Mix Asphalt (HMA) design and construction. It includes five days of lectures, demonstrations of laboratory tests, and discussions of all phases of asphalt technology including:

Asphalt Binders
- Refining
- Physical properties
- Superpave binder testing and specifications
- Modified asphalt binders

Aggregate
- Aggregate testing
- Specific gravity and absorption
- Blending and batching

Hot Asphalt Mix
- Desirable HMA properties
- Types of mixes (SMA, Open Graded Friction Course, Superpave)
- Superpave volumetric mix design
- Recycling

Construction
- HMA facility operations
- Laydown and compaction methods
- Quality control/assurance of HMA mixes

HMA Design and Rehabilitation
- Structural design of HMA pavements
- Maintenance and rehabilitation
- Trouble shooting
- Performance testing

Laboratory Demonstrations
- Asphalt binder characterizations
- Aggregate characterization
- HMA mix design and analysis (including Superpave)
- Others

Who Should Attend?
NCAT will accept applications from practicing engineers in either the private or the public sectors in the US and abroad, including personnel from state Departments of Transportation (DOTs), counties, municipalities, the military, and the FHWA and FAA, as well as consulting firms, suppliers, and contractors. It is recommended that attendees have an undergraduate degree and at least three years of experience in HMA technology.

Funds are available for state DOT personal through the FHWA to attend this course. Please contact your state materials and research engineer for more information.

Upon completion, participants will be able to make knowledgeable decisions related to HMA pavements and communicate effectively with asphalt specialists.
Overview
Superpave technology in the U.S. is the result of a $50 million SHRP research effort to develop performance-based specifications relating laboratory analysis to field performance. This workshop provides a basic understanding of the Superpave mix design process and volumetric mix design procedures. Two days will be spent in the classroom and one and one-half days in the laboratory doing hands-on training.

In the Classroom
- Overview of Superpave
- Superpave binder testing and specification
- Superpave aggregate testing and requirements
- HMA volumetric analysis
- Superpave mix design
- Moisture susceptibility testing
- Impact of mix design on HMA performance and construction
- Recycling
- New technology and equipment
- HMA performance testing

In the Lab
- Demonstration of binder testing procedures
- Aggregate tests associated with Superpave
- Volumetric mix design using the Superpave gyratory compactor
- Moisture susceptibility testing

Who Should Attend?
NCAT will accept applications from any individual involved in the HMA paving industry, including project engineers, testing personnel and inspectors. To get the most out of the course, it is recommended that attendees have some experience with Marshall or Hveem mix design procedures.

Funds are available for State DOT personnel through the FHWA to attend this course. Please contact your state materials and research engineer for information.

Upon completion, attendees will be able to develop a Superpave volumetric mix design in their laboratories.

“This course was very helpful because we learned the application for each test!”

“The overall content was great! It explained and added detail to the subject.”
Overview
This course provides college and university civil engineering faculty with the tools to teach undergraduate and graduate courses in asphalt technology, with the goal of increasing the pool of qualified civil engineering graduates with a background in HMA. A mix of intensive lectures, laboratory exercises and discussions will cover all phases of asphalt technology including:

Asphalt Cement
- Crude oil
- Types of asphalt
- Asphalt specifications and new Superpave binder tests

Aggregates
- Aggregate characteristics
- Quarrying operations
- Processing and blending aggregates for HMA

Hot Mix Asphalt
- Desirable HMA properties
- Types of mixes
- Philosophy of mix design
- Mix design methods
- Field performance tests
- Criteria for selection of a job mix formula
- Mix characterization tests

Construction
- HMA facility operations
- Equipment for production and placement
- Laydown methods
- Compaction methods
- Quality control/assurance

Design and Rehabilitation
- Structural Design
- Maintenance
- Rehabilitation
- Recycling

Instructors
E. Ray Brown, NCAT/AU
Randy West, NCAT
Don Watson, NCAT
Jon Epps, Granite Construction
David Timm, NCAT/AU
Tim Vollor, NCAT Lab
Buzz Powell, NCAT Test Track
Andre Smit, NCAT

Faculty will leave the course with the tools needed to teach a course in asphalt technology.

8-day course
June 19-28
NCAT
Auburn, Alabama
52 PDH/5.2 CEUs

No fees
Registration limited to 30; register before March 31, 2007
All course materials, laboratory supplies, and lectures will be provided.
Eligible participants will receive a stipend to cover some housing, food and transportation costs. This stipend is provided by the National Asphalt Paving Association Young Leaders and Research and Education Foundation.
Contact Ray Brown for scholarship information: (334)844-6228
APPLICATION PROCESS
If you are interested in attending these courses, complete the form below and return it to NCAT. Each person who responds will be contacted concerning participation.

Name: ___________________________ Date: __________
Current Position: ___________________________
Company/Organization: ___________________________
Office Address: ___________________________
City __________________ State ______ Zip ______
Telephone: (____) __________ E-mail: ___________________________
Experience with asphalt materials: ___________________________
Referred by: ___________________________

Mail your completed registration form to:
National Center for Asphalt Technology
277 Technology Parkway
Auburn, AL 36830, USA

Fax your completed registration form to:
Fax: (334) 844-6248

Register by phone:
Phone: (334) 844-6228 (Linda Kerr)

2007 Course Offerings

Asphalt Technology Short Course
☐ February 26
- March 2, 2007 . . . . . . . . . . . . $850

SUPERPAVE Volumetric Mix Design Short Course
☐ March 26-29, 2007 . . . . . . . . . . . . $750
☐ For Certification (GA, NC) . . . $800

Professor Training Program in Asphalt Technology
☐ June 19-28, 2007 . . . . . . . . . $NC

Total Registration Fees

www.ncat.us

National Center for Asphalt Technology
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277 Technology Parkway
Auburn, AL 36830, USA