

Department of Civil Engineering
Kansas State University
CE 773 : Hot Mix Asphalt Mixture Design and Construction
Spring 2002 -- 5:30p.m. in Room Seaton 142

Instructor: Dr. Stefan Romanoschi

Office: 2112 Fiedler Office Hours: W 11:30-2:30 PM

Phone: 532-1594 E-mail: sromano@ksu.edu

Catalog Description: An in depth study of the properties of constituent materials for asphalt concrete mixtures. Marshall and Superpave methods for hot-mix asphalt design. Theory and practice of asphalt concrete mix for pavements, including specifications and construction methods for hot-mixes and surface treatments. Maintenance and rehabilitation of flexible pavements. Relationships of material engineering properties to pavement design and performance. One two-hour lecture and one three-hour lab sessions per week.

Textbook: *Hot Mix Asphalt Materials, Mixture Design and Construction*, By Roberts F. and al.
Second Edition.

Additional Material :

Richard D. Barksdale, Editor, *The Aggregate Handbook*, by the National Stone Association,
Washington, D.C., 1991
Hot Mix Asphalt Paving Handbook by NAPA

Course Objectives: *By the end of the course the students will be able to :*

1. *Perform and understand* advanced methods for analyzing the properties of asphalt cement, hot mix asphalt;
2. *Conduct* rigorous analyses for selecting materials for the HMA production;
3. *Design* a Hot Mix Asphalt using the Marshall and the Superpave design methods;
4. *Understand* the HMA production, placement and compaction processes;
5. *Make* scientific observation and *conduct* analyses for identifying the deteriorations in a distressed flexible pavement, their causes, as well as the optimum remediation methods;
6. *Communicate* in the form of *written* reports and *oral* presentations; and
7. *Participate* in team exercises that include preparation of technical reports and group presentation/discussions.

Assessment Method: The final grade for this course will be determined using the following basis:

Mid-Term Exam.....	25%	A : 90% - 100%
Comprehensive Final Exam	30%	B : 80% - 90%
Homework	5%	C : 70% - 80%
Quizzes	5%	D : 60% - 70%
Term -Paper	20%	F : < 60%
Oral presentation	15%	

