

New Course Announcement

EMERGING TECHNOLOGIES IN BRIDGE ENGINEERING

Graduate level course CIE 580, 3 credit hours

Professor-In-Charge: George C. Lee

This course is designed to explore some of the most recent developments in the field of bridge engineering, with a focus on the design and construction of highway bridges. Topics include seismic protective systems and retrofitting, bridge preservation strategies, design and analytical software, structural instrumentation and health monitoring, comprehensive bridge information modeling (BrIM), accelerated project delivery, and high performance materials. The course will give students a head start on grasping the most pressing issues and most feasible solutions to problems facing practicing engineers today.

"The next generation of bridge engineers will be called on to do more with less to maintain and manage an aging bridge system. New shapes, new materials and new technologies will be the tools needed to accomplish this goal. This course will provide students with insight on what is needed, what is planned and what is underway in these areas."

- Mal Kerley, P.E., Chairman, AASHTO Subcommittee on Bridges and Structures

COURSE FEATURES:

- Available On-Line
- Developed in Collaboration with AASHTO Subcommittee on Bridges & Structures
- Applicable Towards Masters Program in Bridge Engineering
- Applicable Towards an Advanced Certificate in Bridge Engineering
- Training Modules Qualify for Professional Development Credit
- Free Live Webinar for Selected Invited Speakers

TO ENROLL:

Distance Learning via EngiNet:
www.eng.buffalo.edu/EngiNet

On-Campus Course:

Kirsten Brown, Graduate Admissions - Phone: (716) 645-4350 ■ Email: kabrown@buffalo.edu

Professional Development (PDH credit):

Michele Sacco - Phone: (716) 645-3307 ■ Email: msacco@buffalo.edu

"This course offers an opportunity to learn from the experience of a variety of distinguished bridge engineers from around the country."

- Harry A. Capers, Jr. P.E., Vice President & Corporate Bridge Engineer, Arora and Associates, PC (former NJDOT State Bridge Engineer)

Questions and/or comments about the course or the bridge engineering program may be directed to Jerome O'Connor at jso7@buffalo.edu or by calling (716) 645-5155.

CIE-580: Emerging Technologies In Bridge Engineering

Course location: University at Buffalo (UB), North Campus, Baldy Hall 200G Time: 5:00 - 7:50 pm Eastern
 UB's Professor for the course is George Lee.

Class #	Date (Mondays)	Presenter	
		5:00 - 6:15	6:30 - 7:45
1	30-Aug-10	Waseem Dekelbab, Transportation Research Board <i>Highway Research Project Selection</i>	[Prof. George Lee class time.]
2	13-Sep-10	Derrell Manceaux , Fed. Highway Administration <i>Seismic Retrofitting of Bridges</i>	Michel Bruneau, University at Buffalo <i>Buckling Restrained Braces and Structural Fuses</i>
3	20-Sep-10	W. Jay Rohleder, Jr., Figg Engineers Inc. <i>Innovations in Segmental Bridge Construction</i>	Michael Adams, Federal Highway Administration <i>Geosynthetic Reinforced Soil (GRS) Abutments</i>
4	27-Sep-10	Phil Yen, Federal Highway Administration <i>AASHTO's New Seismic Design Guide Specifications</i>	Michael Constantinou, Univ. at Buffalo <i>LRFD Procedures for Elastomeric Bearings</i>
5	4-Oct-10	John Fisher, Lehigh University <i>Fatigue Design: Its Past, What it is Today, and its Future</i>	Lou Triandafilou, Fed. Highway Administration <i>Trends in High Performance Materials</i>
6	11-Oct-10	Earl Dubin , Fed. Highway Administration <i>Moveable Bridges</i>	Patrick Clarke, WA Dept. of Transportation <i>Floating Bridges</i>
7	18-Oct-10	[Prof. George Lee class time.]	
8	25-Oct-10	Sreenivas Alampalli , NY Dept. of Transportation <i>Structural Health Monitoring</i>	Salvatore Salamone, University at Buffalo <i>Health Monitoring of Prestressing Tendons in Post-tensioned Concrete Bridges</i>
9	1-Nov-10	Ken Fishman, McMahon & Mann, Engrs, PC <i>Metallically Stabilized Earth Systems, Design and Performance</i>	Jerry DiMaggio, Transportation Research Board <i>Geotechnology; Past, Present & Future</i>
10	8-Nov-10	Ed Wasserman, TN Dept. of Transportation <i>Emerging Technologies in Bridge Design & Construction</i>	Stuart Chen, Univ. At Buffalo <i>Bridge Information Modeling (tentative)</i>
11	15-Nov-10	Mary Lou Ralls, Ralls Newman, LLC <i>Successes in Accelerated Bridge Construction</i>	Amjad Aref, University at Buffalo <i>Seismic Performance of a Segmental Bridge System</i>
12	22-Nov-10	tbd	tbd
13	29-Nov-10	Student presentations.	
14	6-Dec-10	Student presentations.	

Notes:

- 1 No class 9/6/10 Labor Day.
- 2 A typical class will consist of two modules, each being 1 hour 15 minutes including Q&A.
- 3 Each Student will develop a technical proposal (either research or engineering investigation) strictly following the guidelines specified by Professor Lee. Ideas must be fully developed by October 18, approved by the instructor and presented to the class on October 18. The full proposal will be presented to a panel of judges on November 29 and December 6. The written proposal should be submitted by the specified date of final examination.
- 4 Class requirements (for on-campus students). Travel to Buffalo is not mandatory for EngiNet students.
 - Attendance (or EngiNet participation)
 - Individual meetings with the instructor to discuss your proposal (minimum of four)
 - Meetings during the semester (telephone conversations OK for EngiNet students)
 - Report presentation on October 18
 - Written proposal and an oral presentation on November 29 or December 6
- 5 For info about earning credit via EngiNet distance learning, go to www.eng.buffalo.edu/EngiNet.
- 6 Questions / Comments? Contact Jerome O'Connor (716) 645-5155 jso7@buffalo.edu