DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING
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CE 6311 Bridge Design, LRFD Approach
Summer 2016: July 5 – August 13, Tuesday & Thursday 6:10-8:40PM

Course objectives
Recognize types & structural elements of highway bridges
Understand AASHTO LRFD Bridge Design Specifications
Determine force effects, including live load & distribution
Design superstructure elements
Use of bridge design software: QCon-Bridge & Bentley-LeapBridge

Course contents
1. Introduction: Types & components of highway bridges
2. Design philosophies (ASD vs LRFD) & Limit States
3. Highway live load model
4. Load distribution & load effects
5. Design of reinforced concrete slab bridges
6. Design of slab/beam prestressed bridges
7. Software: QCon Bridge & Bentley LeapBridge

References
• PCI Bridge Design Manual, 3rd edition. Available at reduced price for students.

Instructor: Sameh S. Badie, Ph.D., PE
Dr. Badie is a full-time professor of structural engineering at the George Washington University. Dr. Badie has more than 30 years of experience in academia at the undergraduate & graduate level, and 20 years of experience in research related to prestressed concrete bridges. Dr. Badie is the PI/Co-PI of NCHRP 12-41, 12-65, 18-14 & 12-96. Dr. Badie is the recipient of 2012 PCI Young Educator Award, 2013 SEAS Distinguish Teaching Award, and 2013 PCI Martin P. Korn Award. Dr. Badie has more than 35 publications in the field of analysis and design of prestressed concrete structures.

If you have any questions, please contact Prof. Badie at: badies@gwu.edu