

MASTER'S PROGRAM IN BRIDGE ENGINEERING



The Department of Civil, Structural and Environmental Engineering at the University at Buffalo has launched a new master's program in Bridge Engineering to address the need for highly qualified individuals to plan, design, construct, and manage bridge and transportation infrastructure. This unique program is being developed with support from the Federal Highway Administration, in collaboration with AASHTO's Subcommittee on Bridges and Structures and the New York State Department of Transportation.

Component A: Basic Bridge Engineering Knowledge and Technical Skills

Core Technical Program: (18-21 Credit Hours) Courses include Introduction to Bridge Engineering, Structural Dynamics, Finite Element Analysis, Earthquake Engineering, Engineering Management, Foundation Design, Steel Design and Concrete Design.

Component B: Broader Professional Perspective and Leadership Capacity

Current Practice Lecture Series: (6 Credit Hours) Topics include Emerging Technologies in Bridge Engineering (Accelerated Bridge Construction, Seismic Isolation), Bridge and Highway Infrastructure Management and Public Policy (Bridge Preservation and Asset Management, Understanding the Inner Workings of AASHTO, FHWA, and TRB; How Research is Programmed and Funded; Environmental and Sustainability Issues; Innovative Financing).

Component C: Practical Engineering Exposure and Experience

Engineering Projects: (3-6 Credit Hours) Carried out individually or in groups, supervised jointly by a faculty member and a practicing engineer from New York State DOT (or another DOT, consulting firm, public authority, or FHWA).

The purpose of the program is to prepare a new generation of bridge engineers with the technical and management skills necessary to take over responsibility for renewal of our nation's aging infrastructure. Most of the highway bridges in the U.S. were designed for a 50 year service life, yet the average age of existing bridges is 43 years. In the coming years, there will be a great need for civil engineers, especially those with the skills and knowledge to develop and apply the tools to deal with this growing challenge.

Selected courses available online at: www.eng.buffalo.edu/engineer

For More Info, Contact:

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