CES: Civil Engineering Structures

Courses

CES 3100 Structural Analysis

College of Sci and Engineering, Department of Civil Engineer & Construct Mgt

3 sh (may not be repeated for credit) Prerequisite: EML 3011

This course analyzes statically determinate structures such as beams, trusses, and frames including calculation of deflections. Analysis of indeterminate structures will also be introduced.

CES 4605 Structural Steel Design

College of Sci and Engineering, Department of Civil Engineer & Construct Mgt

3 sh (may not be repeated for credit) Prerequisite: CES 3100

In this course the concepts of structural steel design are introduced. The topics covered include philosophies of design and the Load and Resistance Factor Design (LRFD) method, structural steel systems, structural design loads, and the design of tension members, flexural members, compression members, beam-columns, and bolted and welded connection based on American Institute of Steel Construction (AISC) specifications. Computer aided design utilizing commercially available packages is also introduced.

CES 4702 Reinforced Concrete Design

College of Sci and Engineering, Department of Civil Engineer & Construct Mgt

3 sh (may not be repeated for credit) Prerequisite: CES 3100

This course covers the analysis and design of reinforced concrete components. Current ACI Code provisions for structural design are utilized in learning to design reinforced concrete structural members such as beams, slabs, foundations, and columns. Describe the material properties of concrete and reinforcing steel that govern the mechanics of reinforced concrete behavior.