

### MASTER OF SCIENCE IN CIVIL ENGINEERING STRUCTURAL ENGINEERING

#### **On-Campus and DCE Students:**

(Program of Study must include a minimum of 15 credit hours in Civil Engineering)

#### At Least 9 Credit Hours Required: Credit

CE 732 Advanced Str Anal I	3
CE 742 Advanced Steel Design	3
CE 743 Advanced R/C Theory	3
CE 802 Advanced Mech of Materials	3

#### At Least 12 Credit Hours Required<sup>1</sup>:

CE 641 Civil Engg Materials I	3
CE 741 Civil Engg Materials II	3
CE 745 Structural Dynamics	3
CE 833 Advanced Str Anal II	3
CE 837 Structural Stability	3
CE 844 Prestressed Conc Design	3
CE 803 Numerical and Analytic Techniques for Engineers	3
MATH 551 Applied Matrix Theory	3
MATH 632 Elem Part Diff Equations	3

#### Suggested Electives:

ARE 723 - Timber Structures	3		
ARE 725 - Cold-Formed Steel Design	3		
ARE 726 - Masonry Structural Design	3		
ARE 729 - Building Seismic Design	3		
CE 680 Economics of Des & Constr	3		
CE 703 Resp. of Engg: Codes & Professionalism	3		
CE 704 Resp. of Engg: Leadership & Diversity	3		
CE 728 Adv Geotechnical Design	3		
CE 790 Engineering Ethics Case Studies	3		
CE 801 Comput Methods in CE	3		
CE 822 Shear Strength and Slope Stability	3		
CE 8XX Strengthening Design of Conc. with FRP	3		
CE 8XX Bridge Repair	3		
CE8XX Design of Structures under Dynamic Loads	3		
CIS 635 Intro to Computer Based Knowledge	3		
CIS 730 Prin of Artificial Intelligence	3		
EECE 670 Engg Appl of Machine Intelligence	3		
IMSE 822 Advanced Engg Economy	3		
		MATH 630 Intro to Complex Anal	3
		IMSE 836 Optrns Res in Artificial intelligence	3
		MATH 633 Advanced Calculus I	3
		ME 610 Intro to Finite Elements	3
		ME 650 Intro to Computer-Aided Design	3
		ME 651 Intro to Composites	3
		ME 736 Applied Elasticity	3
		ME 738 Experimental Stress Anal	3
		ME 760 - Engineering Analysis I	3
		ME 831 - Boundary Layer Theory	3
		ME 836 - Introduction to Fracture Mechanics	3
		ME 862 - Finite Elements	3
		ME 871 - Mechanics of Composite Materials	3

<sup>1</sup>Course substitutions to accommodate specific research areas or topics of particular interest will be subject to the approval of the major advisor and supervisory committee.