Fundamental Courses (At Least 1)	Numerical/Experimental Courses (At Least 1)
• CE 544 Advanced Material Science • CE 547 Elasticity • CE 587 Intermediate Fluid Mechanics • CE 639 Critical State Soil Mechanics Theory • CE 546 Advanced Mechanics of Materials • CE 531 Advanced Soil Mechanics • CE 564 Advanced Traffic Flow Theory & Control • CE 559 Structural Dynamics • CE 581 Sp. Tp. Fundamentals of Autonomous Transportation Systems	• CE 505 Appl. Stoch. Analy. & Modell. • CE 530 Adv. Geotech. Eng. Lab. • CE 554 Theory & Design for Measurements in Struc. Eng. • CE 502 Introduction to Finite Elements • CE 563 Meth. of Analysis for Planners & Researcher • CE 59B Meshless Methods for Numerical Modeling
• ChE 631 Transport Phenomena 1 • CHEM 531 Mechanical Properties of Polymers • ESC 551 Environmental Chemistry • GPH 540 Wave Propagation • IE 501 Optimization Techniques I • IE 505 Stochastic Processes & Applications • IE 540 Expert Systems and Applications • IE 544 Decision Analysis • MATH 545 Mathematics of Finance • ME 511(4) Prin. of Material Science & Engineering • ME 523 Elasticity • ME 530 Advanced Dynamics • ME 551(4) Advanced Fluid Mechanics • ME 592 Rheology • ME 601(4) Mech. of Continua 1 • ME 602(4) Mech. of Continua 2 • ME 618 Mech. Behavior of Mater. • PHYS 501 Classical Dynamics I • PHYS 541 Statistical Mechanics I	• ESC 552 Chemistry for Env. Science & Eng. (Lab) • ESC 594 Dynamic Modeling for Environmental Processes • IE 517 Heuristic Methods in Optimization

(4) Four Credits