Summary of Course Requirements

*** (Note: Core Courses and Electives listed are for the Environmental Engineers of the Future Program - Students must also satisfy their University's degree requirements regarding core courses and electives, which may differ from those listed here.)**

	Descriptions for Core Courses (Required)		Elective Courses (must take 3)
University of Miami	**CAE631 Biological Treatment** Wastewater treatment and system design. Characterization of domestic wastewater and flows. Sources of wastewater and health considerations. Unit processes for treatment of wastewater including screening, sedimentation, filtration, flocculation flotation, activated sludge, disinfection, sludge digestion, and sludge disposal. Prerequisite: CAE 440, 540 and 541 or permission of instructor.	**CAE632 Physiochemical Treatment** Water treatment and system design. Drinking water treatment standards, philosophy of setting standards, public health aspects of organic and inorganic contaminants, basis for design treatment facilities, design of unit processes for aeration, sedimentation, coagulation, filtration, softening, disinfection, and oxidation are covered. Theory of membrane processes, ion exchange and water treatment plant residuals are also included. Prerequisite: CAE 440, 541 or permission of instructor.	**CAE630 Environmental Fluid Mechanics** **CAE643 Risk Analysis** **CAE530 Water Quality Control in Natural Systems** **CAE531 Surface Water Hydrology** **CAE532 Ground Water Hydrology** **CAE540 Environmental Chemistry** **CAE541 Envrionmental Microbiology** **CAE542 Solid and Hazardous Waste Engineering** **CAE543 Air Pollution Control Engineering** **CAE680 Indoor Environmental Modeling**

**Please note that some courses are not offered every year.
If a student plans to complete the graduate program in one year, please contact Professor Jim Englehardt to confirm course availability at (305) 284-5557 or jenglehardt@miami.edu