

# Summary of Course Requirements

\* (Note: Core Courses and Electives listed are for the Engineering The Future Funding 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)
<p><b>Iowa State University</b></p>	<p><b>CE 522 Water Pollution Control Processes -</b> Fundamentals of biochemical processes, aerobic growth in a single CSTR, multiple events in complex systems, and techniques for evaluating kinetic parameters; unit processes of activated sludge systems, attached growth systems, stabilization and aerated lagoon systems, biosolids digestion and disposal, nutrient removal, and anaerobic treatment systems.</p>	<p><b>CE 523 Physical- Chemical Treatment Processes-</b> Principles and design of physical-chemical processes; including coagulation, flocculation, chemical precipitation, sedimentation, filtration, adsorption, membrane processes, ion exchange and disinfection; laboratory exercises and demonstrations. Individual and group projects required.</p>
		<p>CE 520 Environmental Engineering Chemistry CE 521 Environmental Biotechnology CE 529 Hazardous Waste Mgmt. CE 524 Air Pollution CE 525 Industrial Wastewater &amp; Resource Recov. CE 527 Solid Waste Mgmt. CE 570 Applied Hydraulic Design CE 571 Surface Water Hydrology CE 572 Analysis &amp; Modeling Aquatic Envts. CE 573 Groundwater Hydrology CE 591 Seminar in Env. Engr.</p>