Department: Environmental Engineering
Program: PhD in Environmental Engineering

Skill Set	Professional Application	Delivery of Skill Set Courses, extracurricular activities, etc. in which the skill set is introduced (I), reinforced (R), or mastered (M)
Knowledge-based skills	• Ability to demonstrate in-depth competence (i.e., advanced knowledge and skills) for professional practice in environmental engineering including designing, optimizing, predicting or better managing air, land and water resources systems using advanced technologies, discovery and innovation. • Ability to integrate environmental regulations and policies into advanced engineering applications and decision-making.	• EVEN 6308 (R/M) • EVEN 6309 (R/M) • EVEN 6311 (R/M) • EVEN 6312 (R/M) • EVEN 6318 (R/M) • EVEN 6319 (R/M) • EVEN 6329 (R/M) • EVEN 6332 (R/M) • EVEN 6340 (R/M) • EVEN 6341 (R/M) • EVEN 6342 (R/M) • Qualifying Exam (M) • Ph.D. research proposal and dissertation (M)
Problem-solving skills	• Analytical skills include the ability to comprehend, define and analyze complex environmental problems and propose engineering solutions; • Creativity to identify alternate solutions with broader impacts and envisioning possible unanticipated consequences of the solutions. • Ability to apply state-of-the-science technologies, methods, data science engineering in solving environmental engineering problems.	• EVEN 6308 (R/M) • EVEN 6309 (R/M) • EVEN 6311 (R/M) • EVEN 6312 (R/M) • EVEN 6318 (R/M) • EVEN 6319 (R/M) • EVEN 6329 (R/M) • EVEN 6332 (R/M) • EVEN 6340 (R/M) • EVEN 6341 (R/M) • EVEN 6342 (R/M) • Ph.D. research proposal and dissertation (M)
Professional skills	• Strong oral and writing skills; • Ability to effectively manage research projects, work in multidisciplinary or transdisciplinary teams,	• EVEN 6329 (R/M) • Ph.D. research proposal and dissertation (M) • Ph.D. proposal defense and dissertation defense evaluations by committee members (M)

Skill Set	Professional Application	**Delivery of Skill Set** Courses, extracurricular activities, etc. in which the skill set is introduced (I), reinforced (R), or mastered (M)
	successfully engage other engineers, stakeholders or communities and diversity in the workforce; • Demonstrate leadership and team building skills.	• Presentations in conferences or professional meetings (M) • Conference proceedings and journal publications (M)