500 Level Courses

VSE 501: Fundamentals of Computing, Engineering & Technology Education. 3 credits.
Aimed at educating future and current engineering faculty on basic concepts, ideas, and issues of computing, engineering, and technology (CET) education to prepare them for future professoriate career and/or help improve current teaching practices. The course material provides a broad introduction to CET education covering historical foundations, theories of learning, and current topics of interest. It focuses on key conceptual questions related to CET learning including what are the characteristics of CET cognition, how is it different than other content areas, what approaches work best for CET learning, how to use theory-driven approaches in education, and the role of technology, including learning analytics and educational data mining, in CET education. Offered by Volgenau School of Engineering. May not be repeated for credit.

Registration Restrictions:
Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may not enroll.

Schedule Type: Lecture

Grading: This course is graded on the Graduate Regular scale.

VSE 502: Teaching and Learning in Computing, Engineering & Technology. 3 credits.
Aimed at educating future and current engineering faculty on principles of how to design and implement computing, engineering, and technology (CET) courses. The course provides a theory-based introduction to course planning, curriculum design, and evaluation and assessment. It focuses on proven methodologies to improve CET teaching including active learning, problem-based learning, and cooperative learning. The course will focus on design of CET learning for development of technical skills, critical thinking skills, creative thinking skills, and communication skills, among students. The course will also introduce students to ABET accreditation. Offered by Volgenau School of Engineering. May not be repeated for credit.

Registration Restrictions:
Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may not enroll.

Schedule Type: Lecture

Grading: This course is graded on the Graduate Regular scale.

700 Level Courses

VSE 794: Graduate Internship. 0-3 credits.
Students with an Internship/Externship/Co-Op opportunity will gain practical experience while engaging in an experiential learning opportunity. Offered by Volgenau School of Engineering. May be repeated within the degree for a maximum 6 credits.

Recommended Corequisite: Completion of at least 18 credit hours.