Course Descriptions

ENGREDU 6100
Foundations and the Field of Engineering Education (3 Credits)
This course is designed to prepare students for future courses and careers in engineering education. Students will engage with literature focusing on theories and frameworks which highlight fundamental issues, questions, and approaches in engineering education.

ENGREDU 6200 (3 Credits)
Learning Theory, Pedagogy, and Assessment in Engineering Education
This course is designed to provide foundational understandings of educational learning theory, pedagogy and assessment methods within engineering education. The processes learned will inform research and instructional practice decisions, approaches and analysis.

ENGREDU 7189.01 (2 Credits)
Engineering Education Practicum I: GTA Preparation and Support
This course supplements Graduate Teaching Assistant (GTA) content based training by exposing GTAs to instructional pedagogies. It is a practical introduction to engineering education for GTAs. Topics include using assessment for learning, best practices in instructional methods, techniques for self-reflection, etc. This version of the course is designed for new GTAs.

ENGREDU 7189.02 (1 Credit)
Engineering Education Practicum II: GTA Professional Development
This course supplements Graduate Teaching Assistant (GTA) content-based training by exposing GTAs to instructional pedagogies. It is a practical extension of ENGREDU 7189.01. Topics include developing new teaching modules, creating training materials for fellow GTAs, furthering techniques for reflection, etc. This version of the course is designed for experienced GTAs.

ENGREDU 7780 (3 Credits)
Research Design in Engineering Education
This course is designed to prepare students for productive research in engineering education throughout their graduate experience and professional careers. Research methods are highlighted and explored including quantitative, qualitative, and mixed methods.

ENGREDU 7881 (1 Credit)
Engineering Education Seminar
Following the structure of the OSU EED Graduate Curriculum, this course serves to contribute to student development as described in the PhD Program Proposal. This course does not necessarily seek to fully accomplish any of the listed goals, but contributes to the objectives and outcomes within goals listed in the proposal.

Dissertation Hours
These are credit hours designed specifically to allow the student time to pursue research, writing, data collection, or other actions related to the dissertation.