# **Prefix and Course Number**

EE P \_\_\_\_

## Course Title (120 character maximum)

Introduction to Privacy Engineering

## Abbreviated Title; Must be ALL CAPS (Max 20 characters)

#### PRIVACY ENGR

### Catalog course description (450 character maximum) Example course descriptions here

Explores privacy threats arising from advancements in data mining and artificial intelligence, the history of privacy, and major privacy legal frameworks (such as GDPR and CCPA). Covers topics such as unraveling of privacy and inverse privacy, privacy design frameworks, privacy-preserving techniques, such as anonymization, differential privacy, and polymorphic encryption.

### Justification for adding course

The ECE Professional Masters Program (PMP) proposes the creation of a new permanent course, EE P \_\_\_\_: Introduction to Privacy Engineering. This course was successfully offered under the special topics number EE P 595 for three quarters. This course is 4 credits, meeting for 4 hours per week.

EE P \_\_\_\_\_ will be offered as part of PMP's standard MSEE degree program.

#### **Evaluation details**

- Readings and discussion: 20%
- Labs: 25%
- Project: 55%

#### **Learning Objectives**

By the end of this course, students will demonstrate the ability to:

- Understand the importance of privacy in engineering and the current research and tech policy efforts in the areas of privacy, privacy engineering and usable privacy.
- Collect, analyze and reconcile the diverse technological, business and tech policy aspects impacting how and why information is collected, managed, used and shared in some system.

- Evaluate system designs based on privacy principles, and privacy requirements and integrate privacy into the engineering lifecycle phases.
- Work as a member of an interdisciplinary team, to address critical system requirements in a privacy-sensitive ecosystem.
- Critically evaluate the strengths and weaknesses of various privacy approaches and frameworks.
- Implement different privacy paradigms, and embed them into various systems during both design and implementation phases.