Embedded Systems Masters program
Goal: To train next generation of engineers in fundamentals of embedded system design and implementation
Interdisciplinary Curriculum

Intersection of Computer Science, Computer Engineering, and Control Systems

Industry:

Avionics, Automobile, Defense, Medical devices, Robotics

Topics

Hardware-software co-design
Real-time operating systems
Integration of control, computation, and communication
Safety-critical systems
Model-based design, Specification, and Verification
Curriculum

Required Courses (4)

CIS541: Embedded Software for life-critical applications (Fall I)
CIS540: Principles of Embedded Computation (Spring I)
CIS 542: Embedded Computing Platforms (Spring I)
ESE 519: Real-Time and Embedded Systems (Fall II)

Electives (6)

Embedded Systems Project / Masters Thesis
500-level CIS courses
  CIS 501: Computer Architecture
  CIS 505: Software Systems
  CIS 553: Networked Systems
  CIS 580: Machine Perception
500-level ESE courses
  ESE 505: Control Systems
  ESE 531: Digital Signal Processing
  ESE 535: Electronic Design Automation
PRECISE Center
Penn Research in Embedded Computing and Integrated Systems
http://precise.seas.upenn.edu/

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