Approved Cognate Areas

**Engineering Entrepreneurship**
EGN6640  Entrepreneurship for Engineers
EGN6642  Engineering Innovation
EGS6039  Engineering Leadership
CIS 6930: Recent Advances in Social Network Computing
IS 6930: Dept/CIS 4930 – 9024 Data Mining

**Virtual Environments User Experience/ Natural User Interactions**
DIG 6751C Protocols for Multimedia Interfaces
CEN 5726 Natural User Interaction (CISE Course Under Review for Approval) (3)
DIG6126C – Interaction Design

**Information Security**
CNT 5410: Advanced Network Security
CIS 5370: Advanced Systems Security
CIS 5371: Introduction to Modern Cryptography
CIS 6930: Cellular and Mobile Network Security
CIS 6930: Embedded Systems Security
CAP 6930 Malware Reverse Engineering
EEL 6935: Cross Layered Computer Security
CIS 6xxx: Penetration Testing and Ethical Hacking

**Data Science**
CAP4770/CAP5771 Introduction to Data Science
COP5725 Data Management Systems or CAP6610 Machine Learning

Select from:
ISM6405+ISM6423  Introduction to Business Intelligence/Data Mining for Business Intelligence
CAP5100/DIG6125C Human Computer Interactions/Digital Design and Visualization
LAW 6930 Electronic Discovery Data analysis and Review
LIN 6773  Topics in Computational Linguistics
STA 6466-7 Probability theory I and II
STA 7346 Statistical Inference I
STA 7934 MCMC Methods in Statistical Inference
EIN 6905 Data Analysis and Data Mining in Systems Engineering
CAP 6769 Advanced Topics in Data Science

**K-12 Teaching with Technology**
EME 5404: Instructional Computing II: Media Ecologies and Open Education
EME 5207: Designing Technology-Rich Curricula
EME 5405: Internet in K-12 Instruction
EME 6059: Blended Learning Environments

**Instructional Design**
EME 6208: Designing Integrated Media Environments I
EME 6606: Advanced Instructional Design
EME 6235: Managing Educational Projects
EME 6609: Instructional Design

**Managing Distance Education Environments**
EME 6609: Instructional Design
EME 6235: Managing Educational Projects
EME 6458: Distance Teaching and Learning
EME 6236: Distance Education Leadership and Management

**Online Teaching and Learning**
EME 6609: Instructional Design
EME 6458: Distance Teaching and Learning
EME 6059: Blended Learning Environments
EME 6208: Designing Integrated Media Environments