UC College of Engineering and Applied Science
Department of Electrical Engineering and Computing Systems

Minor in Communications and Signal Processing (CSP)
7 courses, 21-22 hours
(student must earn a grade of C- or above in all courses taken for the minor)
Minor Advisor: H. Fan

Description: Communications and signal processing are closely related fields that are at the core of many existing and emerging products and systems in telecommunication, networking, speech recognition, computer vision, medical imaging and many other areas. This minor will prepare students for the mastery of fundamental theory, techniques and applications in communication systems and signal processing.

Prerequisites: Open to any UC student who meets the prerequisites for the courses required for this minor

Learning Outcomes:

- Students will comprehend the fundamental concepts, techniques and principles of digital signal processing and modern communication systems
- Students will be able to analyze digital signals and discrete-time systems and to evaluate the performance of digital communication systems
- Students will be able to design and implement digital signal processing algorithms for various applications
- Students will comprehend radio propagation characteristics and apply various techniques to solve the problems encountered in wireless communications
- Students will be able to design modern communication systems in the presence of noise, inter-symbol interference, band-limited channels or/and wireless fading channels

Course Requirements for the Communications and Signal Processing Minor

Fall	Spring
Senior Project I-related to Communications (3 cr)	Senior Project II-related to Communications (3 cr)
EECE 5119 Probability and Random Processes (3 cr)	EECE 5126 Introduction to Communication Systems (3 cr)
EECE 5124 Introduction to Digital Signal Processing(3 cr)	EECE 5127 Digital Communication Systems (3 cr)

One elective course chosen from:
EECE 5111 RF and Microwave Wireless Communications (3 cr, Fall)
EECE 5158 GPS System & Receiver Principles (3 cr, Spring)
CS 5143 Computer Networking (3 cr, Fall)
CS 5197,Introduction to Wireless and Mobile Networking (3 cr, Spring)
ELTN 4056C Computer Networks (4 cr, Fall)

Approved by CEAS faculty July 23, 2015	*Approved by Provost September 30, 2015*	*Updated by EECS Undergraduate Council May 24, 2017*