COMPUTER ENGINEERING (CPE)

CPE 431 DIGSYSTEM TESTING AND DESIGN (3 Hours)
Prerequisite: CPE 330 and EN 212.
This course introduces fundamental techniques for detecting defects in VLSI circuits. Topics include fault models, fault detection, and schemes for designing systems to be easily testable and with self-test capability.

CPE 471 BIOMEDICAL SIGNAL PROCESSING (3 Hours)
This course introduces two fundamental concepts of signal processing: linear systems and stochastic processes. Various estimation, detection and filtering methods are developed and demonstrated on biomedical signals. The methods include harmonic analysis, autoregressive model, Wiener and Matched filters, linear discriminants, and independent components.

CPE 472 BIOMEDICAL MATERIALS (3 Hours)
An overview of biomaterials in three basic classes: metals, ceramics, and polymers. Topics include biomaterials used in special medical applications such as tissue replacement, absorbable and non-absorbable sutures, soft tissue replacements. Tissue, body and blood responce to implants will be investigated.