Bioengineering Required and Elective Course Schedule 2013-14

BIO112 w/ Lab and BIO225 w/ Lab are offered in every term. There are also BIO3xx level courses in each term. The required and elective engineering courses are listed below.

**Fall 2013**

**Required:**
- BNG 101: Graphics and Image Processing for Biomedical Systems (Profs. Cotter and Khetan)
- ECE 225: Circuits w/ Lab (Prof. Chang)
- ECE 241: Discrete Systems w/ Lab (Prof. Catravas)

**Electives:**
- BNG 338: Mechanobiology (Prof. Currey) [WAC]
- BNG 497: Bioengineering Senior Project I
- ECE 118: Digital Logic (Prof. Hedrick)
- ECE 325: Acoustics of Speech Communication (Prof. Hanson) [**change in term offered**]
- ECE 337: Data Communications and Networks (Prof. Hedrick)
- ECE 351: Probability and Digital Communications (Prof. Spinelli)
- ECE 363: Electronic Circuits w/ Lab (Prof. Buma)
- ECE 368: Antenna Theory (Prof. Chang)

**Winter 2014**

**Required:**
- BNG 201: Biomechanics I w/ Lab (Prof. Mafi)
- BNG 495: Bioengineering Capstone (Prof. Khetan & Prof. Currey)
- ECE/BNG 386: Bioinstrumentation w/ Lab (Prof. Buma)
- ECE 225: Circuits w/ Lab (Prof. Chang)
- ECE 240: Circuits & Systems w/ Lab (Prof. Hanson)

**Electives:**
- BNG 311: Advanced Biomechanics w/ Lab (Prof. Currey)
- BNG 335: Polymeric Biomaterials (Prof. Khetan) [**new course**]
- BNG 497: Bioengineering Senior Project I
- BNG 498: Bioengineering Senior Project II
- ECE 318 Digital Design w/ Lab (Prof. Traver) [WAC]
- ESC 324 Advanced Characterization of Nanomaterials (Prof. Catravas, Hagerman, Cohen)
- ECE 343 Electromagnetic Engineering w/ Lab (Prof. Chang)
- ECE 366 Control Systems w/ Lab (Staff)

**Spring 2014**

**Required:**
- BNG 202: Biomechanics II w/ Lab (Prof. Currey & Khetan)
- BNG 331 Cell-Tissue-Material Interaction [Required Course] (Prof. Khetan)
- ECE 240: Circuits & Systems w/ Lab (Prof. Hanson)
- ECE 241: Discrete Systems w/ Lab (Prof. Catravas)

**Electives:**
- BNG 396 Capstone Design II (Profs. Currey & Khetan) [**new course – seniors only, a Bioengineering elective to continue project work from BNG 495**]
- ECE/BNG 487 Medical Imaging Systems (Prof. Buma)
- BNG 498: Bioengineering Senior Project II
- CSC 243: Bioinformatics (Profs. Horton and Fernandes)
- ECE 248: Semiconductor Devices w/ Lab (Prof. Buma)
- ECE 350 Communication Systems w/ Lab (Prof. Spinelli)
- ECE 352 Embedded Microcontroller Systems w/ Lab (Prof. Hedrick)
- ECE 354 VLSI Design (Prof. Traver)

Note: Other engineering courses, taken in consultation with your advisor, may be used to satisfy the Bioengineering Electives with the approval of the program co-directors (Profs. Cotter and Kirkton in 2013-14)