BIOMEDICAL ENGINEERING (BME)

Courses

BME 001. Intro to Biomedical Eng Design. 0 or 2 Credits.
Introduction to the biomedical engineering profession. Hands-on experiences that emphasize interdisciplinary teamwork, technical communications, and project design methodologies. Co-requisite: ENGR 002.

BME 081. Biomedical Eng Lab I. 0 or 2 Credits.
Laboratory experiments pertaining to biomedical instrumentation and biomechanics. Computer-based modeling of biological networks.

BME 090. Internship. 1-3 Credits.
On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

BME 096. Special Topics. 1-18 Credits.
See Schedule of Courses for specific titles.

BME 151. Fall BME Workshop. 0 or 1 Credits.
Seminars, lab tours and hands-on experiences to provide biomedical context to concurrently taken engineering courses. Case studies related to design and ethics. Team based project.

BME 152. Spring BME Workshop. 0 or 1 Credits.
Seminars, lab tours and hands-on experiences to provide biomedical context to concurrently taken engineering courses. Engineering design process. Researching and defining Capstone Design projects. Prerequisite: BME 151.

BME 181. Biomedical Eng Lab II. 0 or 2 Credits.
Laboratory experiments including those related to biomedical sensing and instrumentation, biomechanics, tissue engineering, and/or computer-based modeling of biological networks. Prerequisite: BME 081.

BME 187. Capstone Design I. 3 Credits.
Project management, professional ethics, social/ economic impact, and contemporary issues that arise in engineering practice. Interdisciplinary project development including project selection, design requirements, prototyping, and communications. Pre/Co-requisite: Senior standing.

BME 188. Capstone Design II. 3 Credits.

BME 190. Internship. 1-18 Credits.
On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

BME 192. Independent Study. 1-18 Credits.
A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

BME 193. College Honors. 3-6 Credits.
Honors studies leading to a thesis.

BME 196. Special Topics. 1-18 Credits.
See Schedule of Courses for specific titles.

BME 197. Teaching Assistantship. 1-3 Credits.
Undergraduate student service as a teaching assistant, usually in an introductory-level course in the discipline, for which credit is awarded. Offered at department discretion.

BME 198. Undergraduate Research. 1-18 Credits.
Undergraduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

BME 199. Cooperative Ed Experience. 12 Credits.
On-site, full-time, supervised work experience in biomedical engineering or related field appropriate for sophomore or junior levels that also satisfies the overall educational objectives defined by the CEMS Engineering Co- op Program. Prerequisite: Sophomore or Junior; Biomedical Engineering major.

BME 227. Biomedical Instrumentation. 3 Credits.
Measurement techniques for biomedical engineering research and industry, and health care institutions. Integrated biomedical monitoring, diagnostic, and therapeutic instrumentation. Prerequisite: EE 100 or EE 004. Co-requisite: EE 121, ANPS 020, or Instructor permission. Cross-listed with: EE 227.

BME 290. Internship. 1-18 Credits.
On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

BME 292. Independent Study. 1-18 Credits.
A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

BME 296. Special Topics. 1-18 Credits.
See Schedule of Courses for specific titles.

BME 297. Teaching Assistantship. 1-3 Credits.
Undergraduate student service as a teaching assistant, usually in an introductory-level course in the discipline, for which credit is awarded. Offered at department discretion.

BME 298. Undergraduate Research. 1-18 Credits.
Undergraduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

BME 299. Cooperative Ed Experience. 12 Credits.
On-site, full-time, supervised work experience in biomedical engineering or related field appropriate for sophomore or junior levels that also satisfies the overall educational objectives defined by the CEMS Engineering Co-op Program. Prerequisite: Sophomore or Junior; Biomedical Engineering major.