

**Michigan Technological University****Minor in Medical Devices and Instrumentation**

Program Code EMDM, Academic Year 2021-22

Department of Biomedical Engineering

Total Credits Required: 18

**Required Courses: 12 credits**

<b>Course</b>	<b>Credits</b>
BE 2400 Cellular & Molecular Biology I	3
BE 2700 Biomedical Signals & Systems <i>Prereq: CH1150, MA2160, ENG1102 and PH2100</i>	3
BE 3700 Biomedical Instrumentation <i>Prereq: BE2700, EE3010</i>	3
BE 4755 Medical Devices	3

**Elective Courses: 6 credits minimum**

<b>Course</b>	<b>Credits</b>
BE 3400 Laboratory Techniques for BME <i>Prereq: BE2800 or MSE2100</i>	2
BE 3701 Biomedical Instrumentation Lab	1
BE 3800 Biomaterials II <i>Prereq: BE2800 or MSE2100</i>	3
BE 4115 Finite Element Modeling <i>Prereq: (MA2320 or MA2321) and (MA3520 or MA3521) and (BE3350 or MEEM2150)</i>	3
BE 4250 Biomedical Optics <i>Prereq: (MA2320 or MA2321 or MA2330) and (MA3520 or MA3521 or MA3530 or MA3560) and MA3160</i>	3
BE 4410 Medical Imaging	3
BE 4510 Cardiovascular Engineering <i>Prereq: BE2400</i>	3
BE 4520 Industrial & Clinical Issues	3
BE 4670 Micro- and Nanotechnology for Biomedical Applications	3
BE 4700 Biosensors: Fabrication & Application <i>Prereq: BE3700 and BE3701</i>	3
BE 4770 Biomedical Microcontrollers <i>Prereq: BE3700 and BE3701</i>	3

**This minor is not open to students majoring in Electrical Engineering with a Biomedical Applications Concentration**