

MS Bioelectronics: Track-1: Biosensors and Devices

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| Core | ECE 601 | Linear Systems |
| 2 courses | ECE 673 | Random Signal Analysis I |

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| Professional | ECE 667/BME 669 | Engineering Physiology |
| Skills and | ECE 626 | Optoelectronics |
| Area Requirments | BME 683 or | Microelectronics/MEMS Devices and Systems or |
| 3 courses | ECE 657 | Semiconductor Devices |

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| Electives | ECE 659 | Fabrication Principles of Electronic and Optoelectronic Devices |
| | ECE 620 | Electromagnetic Field Theory |
| | ECE 635 | Biosensors and NanoDevices |
| 5 courses | ECE 658 | VLSI Systems |
| | MATH 635 | Biological Neural Systems/Computational Neuroscience |
| | EM 6H1 | Introduction to Healthcare Delivery Systems |
| | Chem 673 | Biochemistry |
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| Project, Thesis | ECE 700 | Master's Project in Bioelectronics (3 Credits), replace 1 Elective |
| (optional) | ECE 701 | Master's Thesis in Bioelectronics (6 Credits), replace 2 Electives |

MS Bioelectronics: Track-2: Bio-imaging and Control Systems

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| Core | ECE 601 | Linear Systems |
| 2 courses | ECE 673 | Random Signal Analysis I |

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|-------------------------|-----------------|--|
| Professional | ECE 667/BME 669 | Engineering Physiology |
| Skills and | ECE 626 | Optoelectronics |
| Area Requirments | BME 683 or | Microelectronics/MEMS Devices and Systems or |
| 3 courses | ECE 657 | Semiconductor Devices |

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| Electives | MATH 635 | Biological Neural Systems/Computational Neuroscience |
| | ECE 698 | Medical Imaging Instrumentation & Data Analysis |
| | ECE 698 | Bioelectronics and Biosensor Control Systems |
| 5 courses | ECE698 | Bio-Photonics |
| | ECE 634 | Introduction to Scanning Probe Microscopy |
| | EM 6H1 | Introduction to Healthcare Delivery Systems |
| | Chem 673 | Biochemistry |
| | ECE 640 | Digital Signal Processing |
| | ECE 643 | Digital Image Processing |

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|------------------------|---------|--|
| Project, Thesis | ECE 700 | Master's Project in Bioelectronics (3 Credits), replace 1 Elective |
| (optional) | ECE 701 | Master's Thesis in Bioelectronics (6 Credits), replace 2 Electives |