

## Analog Alliance

### Biomedical Circuit Design

Example outcomes gained by taking this track would include joining groups that design and build medical equipments, implantable devices, and bio-sensors. Local employers include RTI, Sixel Technologies, Nanolytics, and Trivirex. US-wide employers include Medtronic, Guidant, Johnson and Johnson, Boston Scientific, Advanced Bionics, and GE Medical Systems. Courses central to obtaining this outcome include the following:

- ECE 525 Medical Electronics
- ECE 511 Analog Electronics
- ECE 703 Instrumentation Circuits

You should also check on offerings from the Biomedical Engineering Department at [www.bme.ncsu.edu](http://www.bme.ncsu.edu). There you will find BME-specific courses that can help round out a combined circuits/bioengineering degree. Recommended complementary courses include the following:

- BME 422 Fundamentals of Biomedical Instrumentation
- ECE/BME 522 Medical Instrumentation
- BME 201 Advanced Medical Instrumentation (offered at UNC-CH)
- BME 231 Special Topics in Biomedical Instrumentation (offered at UNC-CH)
- ECE 538 Semiconductor Fabrication Theory
- ECE 539 Integrated Circuit Technology and Fabrication

### Sample MS Plan of Work

These plans of work are suggestions only. Feel free to seek other advice or to structure your own curricula. Please note that the actual courses taught are constantly changing, and these might be out of date. These are written assuming you are a full time student taking 10 courses over three semesters. You might choose to not overload in Spring, but take one last course in Spring after this.

Biomedical Circuit Design					
Fall		Spring		Fall	
ECE 511	A	ECE 539	Semi	ECE 792D	A
ECE 525	BME	ECE 703	A	ECE 513	DSP
ECE 549	RF/M	ECE 733	D	ECE 514	Comm
ECE 546	D	ECE 712	A/RF		
ECE 538	Semi	ECE 534	PWR		

### Associated Faculty

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