



# Photonics Concentration

Bachelor of Science in Electrical Engineering

Classes begin in Spring semester of 2<sup>nd</sup> or 3<sup>rd</sup> year:

1. Get a copy of the EE-Photonics Concentration flowchart and the .pdf degree audit that pertain to your catalog term.
2. Take EE2190 in spring of 2<sup>nd</sup> year. (or 3<sup>rd</sup> year)
3. Take EE3190 in fall of 3<sup>rd</sup> year, EE3290 in spring of 4<sup>th</sup> year and EE4490, Laser systems in fall or spring of 3<sup>rd</sup> or 4<sup>th</sup> year. Check schedule each semester for EE4490.
4. Select two concentration elective courses.
5. To officially add a concentration:
  1. Submit a request to add the concentration in the Curriculum Changes Request link in MyMichiganTech.
  2. Meet with Judy for planning help; Judy approves the request.



Want to know more?  
Join SPIE, SB 24 EERC  
spie-officers-1@mtu.edu

### Faculty:

- Dr. Durdu Guney, 729
- Dr. Chris Middlebrook, 628
- Dr. Mike Roggemann, 503



# Engineering Enterprise Concentration

Bachelor of Science in Computer Engineering

Bachelor of Science in Electrical Engineering

1. Choose an Enterprise to join. In Fall of 3<sup>rd</sup> year - begin in ENT3950. If you have more than 4 semesters left, begin in ENT2960.
2. Required project work is 4 semesters in 3<sup>rd</sup> and 4<sup>th</sup> year: ENT3950, ENT3960, ENT4950 and ENT4960.
3. Take Teaming in Enterprise (ENT2961) in Fall of 2<sup>nd</sup> or 3<sup>rd</sup> year; Take Communication Contexts (ENT2962) in Spring of 2<sup>nd</sup> or 3<sup>rd</sup> year.
4. In your 3<sup>rd</sup> year, become familiar with concentration elective courses. A list of these Enterprise Instructional modules are included in your degree audit report. Add your course selections to your academic plan.
5. To officially add a concentration:
  1. Submit a request to add the concentration in the Curriculum Changes Request link in MyMichiganTech.
  2. Meet with Judy for planning help.





# Biomedical Applications Concentration

## Bachelor of Science in Electrical Engineering

Classes begin in 2<sup>nd</sup> year: (can begin in 3<sup>rd</sup> year)

1. Get a copy of the EE-Biomedical Applications Concentration flowchart and .pdf degree audit that pertain to your catalog year.
2. Take Anatomy & Physiology I (BL2010) AND Cellular & Molecular Biology (BE2400) in Fall of 2<sup>nd</sup> year, or 3<sup>rd</sup> year.
3. Take Anatomy & Physiology II (BL2020) Spring of 2<sup>nd</sup> year or 3<sup>rd</sup> year.
4. Decide whether to take Biomechanics I or Biomaterials I for your concentration “focus”. Biomechanics I, BE3300 is offered in Fall semesters; Biomaterials I, BE2800 is offered in Spring semesters.
5. Take BE3700 and BE3701, Bioinstrumentation and Lab in Spring of 3<sup>rd</sup> year.(or 4<sup>th</sup>)
6. Plan to take one “concentration elective course” before you graduate.
7. To officially add a concentration:
  1. Submit a request to add the concentration in the Curriculum Changes Request link in MyMichiganTech.
  2. Meet with Judy for planning help.

### Faculty:

- Dr. Chris Middlebrook, 628
- Dr. Sean Kirkpatrick, M&M 301



# Environmental Applications Concentration

## Bachelor of Science in Electrical Engineering

Classes begin in 3<sup>rd</sup> year:

1. Get a copy of the EE-Environmental Applications Concentration flowchart and .pdf degree audit that pertain to your catalog year.
2. Take Environmental Engineering Fundamentals (CEE3501) in Fall of 3<sup>rd</sup> year, or take CEE3503 in spring; Take Environmental Monitoring and Measurement Analysis (CEE3502) in Spring of 3<sup>rd</sup> year.
3. Decide which remote sensing sequence you will take:  
1) EE4252 and GE4250 OR 2) EE2190 and EE3190
4. Become familiar with the Environmental Engineering Quality elective course list and semester offerings. Choose two courses from the list.
5. To officially add a concentration:
  1. Submit a request to add the concentration in the Curriculum Changes Request link in MyMichiganTech.
  2. Meet with Judy for planning help.

### Faculty:

- Dr. Ashok Ambardar, 826 (DSP)
- Dr. Durdu Guney, 729
- Dr. Chris Middlebrook, 628



# Electric Power Engineering Concentration

## Bachelor of Science in Electrical Engineering

1. Electric Energy Systems (EE3120) is the prerequisite course to the Electric Power Engineering courses. This can be taken in Spring of 2<sup>nd</sup> year, Summer or during 3<sup>rd</sup> year.
2. Take Power Analysis 1 (EE4221) in Fall of 4<sup>th</sup> year; Take Power Analysis 2 (EE4222) and Power Engineering Lab (EE4226) in Spring of 4<sup>th</sup> year.
3. In your 3<sup>rd</sup> year, become familiar with concentration elective courses, prerequisites and semesters offered. You will choose two electric power engineering elective courses. Plan ahead to take the courses you prefer, following prerequisite order.
4. To officially add a concentration:
  1. Submit a request to add the concentration in the Curriculum Changes Request link in MyMichiganTech.
  2. Meet with Judy for planning help.

### Faculty:

- Mr. John Lukowski, 233
- Dr. Bruce Mork, 614
- Dr. Chee-Wooi Ten, 613

