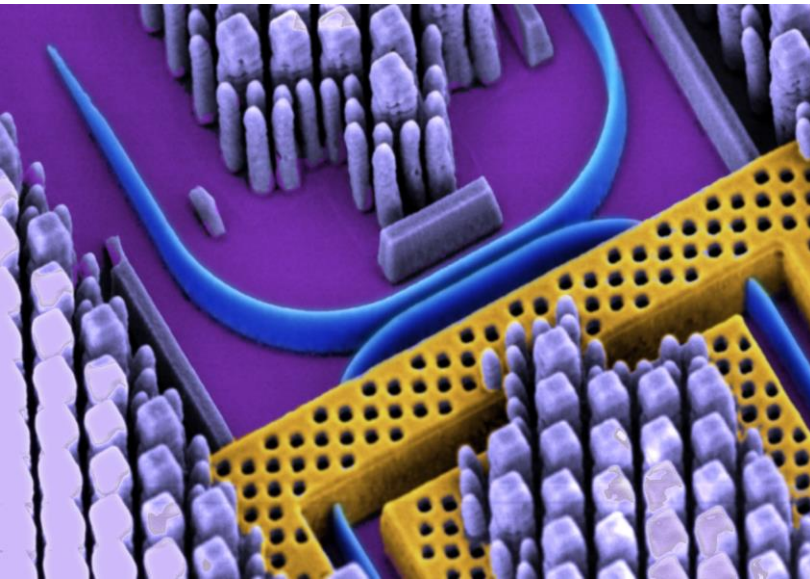


NEW course !

Pre-requisite: ECE350

ECE 442: Silicon Photonics



Silicon photonics is a rapidly growing multi- $\$B$ industry as well as an active area of advanced research. This course will focus on practical applications of Electro-Magnetic concepts to **photonic integrated circuits**.

1. **Passive** devices : filters, converters, polarizers.
2. **Active** devices: modulators, switches, photodetectors.
3. **Optical communications** using silicon photonics.
4. **Applications** in biosensing, quantum, and neuromorphic computing.

Graduate 4 credit hours: independent project on design, testing, and analysis of your own silicon circuit.

Students' testimonies:

- Fantastic course! Enjoyable class. Learned a lot
- Learning physical theory behind device operation is very useful.
- Unique perspective. Provides great insight to industry “why tech matters”
- Very passionate, knowledgeable, caring, and helpful.
- Fair grading
- Really helpful homeworks add a lot to understanding
- Independent project is very useful

