**ELEG5550\_Introduction to Micro- and Nano-Fabrication**

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**Introduction:**

This course introduces the fundamental principles and practice of micro- and nano-fabrication technology. These techniques are the foundation for micro- and nano-chip manufacturing, and are widely employed in many areas such as nanoelectronics, nanophotonics, nanomechanics, and microfluidics. Students will learn micro- and nano-fabrication processes, including lithography, etching, thin-film deposition, etc., and the related sample diagnosis tools and methods.

**Course Outline (tentative):**

1. General introduction

2. Introduction to cleanroom

3. Photolithography 1

4. Photolithography 2

5. E-beam lithography

6. Soft lithography

7. Etching 1

8. Etching 2

9. Thin-film deposition 1

10. Thin-film deposition 2

11. Sample inspection 1

12. Sample inspection 2

13. Exam / presentation / lab tour