EEE4314L - Integrated Circuits Laboratory
One Credit, Two hours, Engineering Topic
**Instructor:** Pulak Bhushan.

**Specific Course Information:** Laboratory experiments in integrated circuits, includes design of RF filters, analog systems, A/D and D/A systems.

**Specific Goals for the Course**

a. **Specific outcomes of instruction**
   This is a Lab course in Integrated Circuits Laboratory, from this lab, you will learn the Basic knowledge of Integrated Circuits from 6 labs:
   Lab 1: Applications of Operational Amplifier
   Lab 2: Voltage Regulators and Applications
   Lab 3: Schmitt Trigger Comparator
   Lab 4: Sinusoidal Oscillator
   Lab 5: Waveform Generator
   Lab 6: Active Filters

b. **Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.**
   In this course the student will have to show
   (a) an ability to apply knowledge of mathematics, science, and engineering (X)
   (b) an ability to design and conduct experiments (simulations), as well as to analyze, interpret data (X)
   (c) an ability to design a system, component, or process to meet desired needs (X)
   (d) an ability to function in multi-disciplinary teams (N/A)
   (e) an ability to identify, formulate, and solve engineering problems (homework) (X)
   (f) an understanding of professional and ethical responsibility (N/A)
   (g) an ability to communicate effectively (through project reports) (X)
   (h) the broad education necessary to understand the impact of engineering solutions in a global and societal context (X)
   (i) a recognition of the need, and an ability to engage in life-long learning (N/A)
   (j) a knowledge of contemporary issues (N/A)
   (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice (X)
   (l) a knowledge of probability and statistics (N/A)

**Brief list of the topics to be covered**
Lab 1: Applications of Operational Amplifier
Lab 2: Voltage Regulators and Applications
Lab 3: Schmitt Trigger Comparator
Lab 4: Sinusoidal Oscillator
Lab 5: Waveform Generator
Lab 6: Active Filters

**GRADING:**

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<th>Course Requirements</th>
<th>Weight</th>
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<tr>
<td>Introduction</td>
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<tr>
<td>Procedure &amp; Experimental results</td>
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<tr>
<td>Simulation</td>
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<tr>
<td>Discussion and Analysis</td>
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<tr>
<td>Conclusion</td>
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**Conversion of Numerical Grade to Letter Grade**

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<td>F: Below 60</td>
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