**ECE 329**

**Digital Circuit Design II + Lab.**

**Fall 2018/2019**

**LAB # 9**

 **03.12.2018**

**Objective:**

To learn about Transistor Transistor Logic (TTL).

1. **Understanding the Transistor Transistor Logic**
2. **Designing fundamental logic gates on Orcad.**
3. **Design the following task on ORCAD by TTL.**

**Tasks:**

1. Design a Nand gate and simulate.



1. Design a Nor gate and simulate.



1. Extend your Nand gate to And gate and simulate.
2. Extend your Nor gate to Or gate and simulate