

## Lab 1: Introduction to Vivado

EE 316: Digital Logic Design

### Overview

This lab is intended to familiarize you with Vivado and review basic digital circuits concepts. By the end of this lab, you should be able to:

- Edit files, run simulations, view circuit schematics, and program the Basys3 board from Vivado.
- Understand digital logic concepts from EE 306.

Be sure to attend your assigned lab section; the TA will give you a tour of the Basys3 board and Vivado.

### Procedure

1. Complete the Lab 1 worksheet.
2. Complete the Vivado tutorial **EXCEPT** *Part C: Turning In Labs*. Read Part C but submit the items that are listed in the section below.
3. Take four pictures of the board showing that the XOR gate from the tutorial works.

### Submission

When you submit labs, you will need to submit two things: your zipped source code and a PDF answering questions given in the lab document. Below are the instructions for creating your zip file. Your PDF should be submitted separately, NOT included inside your zip file.

1. Create the zip file with your edited tutorial source code and bitstream per the instructions in Part C of the tutorial.
2. Create your PDF. Include the following, in order:
  - a. A cover page with your name, EID, section unique number, and professor.
  - b. Four pictures of the board, verifying the XOR functionality.
  - c. Screenshot of the logic simulator from the worksheet.
  - d. The written responses to the questions in the worksheet.
3. Submit your zip and PDF per the instructions in Part C of the tutorial.