

# Digital Design Environment

## Redekopp

Name: \_\_\_\_\_  
Due: See website/Blackboard                      Credit / No Credit                      Score: \_\_\_\_\_

Individually research the topics below and develop a Powerpoint presentation of at most 2 slides per topic that: a.) defines and describes the topic, b.) gives any relevant history, c.) why it is important, d.) how it works, e.) what are the connections between the topics, etc.

Topics for presentation:

1. Compare and Contrast alternative digital integrated circuit implementation options:
  - a. FPGA (Field Programmable Gate Array)
  - b. ASIC (Application Specific Integrated Circuit)
2. SoC (System-on-Chip) [Check out Xilinx's product families of FPGA and SoC's]
3. Hardware Description Language (i.e. Verilog and VHDL and SystemC)
4. Logic Synthesis / EDA (Electronic Design Automation) CAD Tools
5. IP Core
  - a. To get a feel for IP Cores, visit [www.opencores.org](http://www.opencores.org) (an open-source repository of design IP) or <http://www.xilinx.com/products/intellectual-property/index.htm> and browse the various projects

Submit your presentation on Blackboard under Assignments..Homework.