

Course Schedule, Grading and Rules

Week 1:

- 1) Course rules
- 2) Grading information
- 3) Lecture: FPGA

Week 2:

- 1) Lecture: Basic Verilog

Week 3:

- 1) AND gate will be implemented with students as a Vivado tutorial .
- 2) Experiment 1 will be worked on by the students at home. Results and problems regarding to Experiment 1 will be discussed in week 4.

Week 4:

- 1) Verilog Lecture: if-else, case statements
- 2) Discussion of results and problems of Experiment 1.
- 3) Student will complete experiment report for Experiment 1 and upload it to Ninova.
- 4) Experiment 2 will be worked on by the students at home. Results and problems regarding to Experiment 2 will be discussed in week 5.

Week 5:

- 1) Vivado Lecture: constraints, .xdc file editing, pin assignment
- 2) Discussion of results and problems of Experiment 2.
- 3) Student will complete experiment report for Experiment 2 and upload it to Ninova.
- 4) Experiment 3 will be worked on by the students at home. Results and problems regarding to Experiment 3 will be discussed in week 6.

Week 6:

- 1) Vivado Lecture: generate
- 2) Discussion of results and problems of Experiment 3.
- 3) Student will complete experiment report for Experiment 3 and upload it to Ninova.
- 4) Experiment 4 will be worked on by the students at home. Results and problems regarding to Experiment 4 will be discussed next in week 7.

Week 7:

- 1) Verilog Lecture: Clock
- 2) Vivado Lecture: Using IP Catalog
- 3) Discussion of results and problems of Experiment 4.
- 4) Student will complete experiment report for Experiment 4 and upload it to Ninova.
- 5) Experiment 5 will be worked on by the students at home. Results and problems regarding to Experiment 5 will be discussed in week 8.

Week 8:

- 1) Verilog Lecture: Finite State Machines
- 2) Discussion of results and problems of Experiment 5.
- 3) Student will complete experiment report for Experiment 5 and upload it to Ninova.
- 4) Experiment 6 will be worked on by the students at home. Results and problems regarding to Experiment 6 will be discussed in week 9.

Week 9:

- 1) Discussion of results and problems of Experiment 6.
- 2) Student will complete experiment report for Experiment 6 and upload it to Ninova.
- 3) Experiment 7 will be worked on by the students at home. Results and problems regarding to Experiment 7 will be discussed in week 10.

Week 10:

- 1) Lecture: Matlab

- 2) Verilog lecture: reading from a file and writing into a file with testbench
- 3) Discussion of results and problems of Experiment 7.
- 4) Student will complete experiment report for Experiment 7 and upload it to Ninova.
- 5) Experiment 8 will be worked on by the students at home. Results and problems regarding to Experiment 8 will be discussed in week 11.

Week 11:

- 1) Discussion of results and problems of Experiment 8.
- 2) Student will complete experiment report for Experiment 8 and upload it to Ninova.

Course Rules:

- 1) Each student should be prepared when he/she enters to the lab session.
- 1) If a student has a reason for not attending an experiment session which is defined in the general rules of the university, he/she must give a request to the dean's office. If the reason is accepted then the average of the experiment grades will be calculated by using the attended experiment sessions. If the request is not accepted the grade of the absent experiment will be taken as 0.
- 2) If a student's term average grade is lower than 35, the student will get VF.
- 3) There are 8 experiments.
- 4) **Two term projects** and **one final project** will be given. Dates of the projects will be determined during the term.
- 5) The final grade of a student is calculated by using Equation (1). The grade of one experiment is calculated by using Equation (2).

Grading:

$$\text{Final grade} = 0,4 * \text{Average of the experiment grades} + 0,3 * \text{Average of two term project grades} + 0,3 * \text{Final project grade} \quad (1)$$

$$\text{Experiment grade} = 0,7 * \text{Performance during experiment} + 0,3 * \text{Report} \quad (2)$$