

EENG 4760 Reconfigurable Computing
Spring 2019
Time: (Tu, Th) 10:00 - 11:20 am
Meeting Place: NTDP B227

Instructor: Gayatri Mehta
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Course Description:

This course focuses on the fundamental architectural aspects of different reconfigurable devices including some of the commercially available FPGAs, and coarse-grained reconfigurable fabrics from academia and industry. Includes both a description of the architectures and discussion of pros and cons of these architectures for different applications and user needs, including the need for run-time reconfiguration. Also covers various low power reconfigurable devices.

Prerequisites:

EENG 2710 (Digital Logic Design)

Grading:

- Homework Assignments: 60%
- Class participation: 5%
- Paper Presentation: 10%
- Project: 25%

Topics:

- Introduction to reconfigurable architectures
- Fine-grained reconfigurable architectures
- Coarse-grained reconfigurable architectures
- Homogeneous and Heterogeneous architectures
- Partial reconfiguration
- Run-time reconfiguration
- Critical design concerns of semiconductor industry including power, area, performance
- Interconnect structures in reconfigurable architectures
- Design and simulate reconfigurable architectures

Disabilities Accommodation:

The University of North Texas complies with Section 504 of the 1973 Rehabilitation Act and with the Americans with Disabilities Act of 1990. The University of North Texas provides academic adjustments and auxiliary aids to individuals with disabilities, as defined under the law. Among other things, this legislation

requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring accommodation, please see the instructor and/or contact the Office of Disability Accommodation at 940-565-4323 during the first week of class.

Additional Policies and Procedures:

Cell Phones: Please remember to turn off phones prior to class.

Extra Help: PLEASE DO NOT WAIT UNTIL THE LAST MINUTE. If you are having trouble with this class, please come by my office during office hours. I am also available by email at gayatri.mehta@unt.edu.