

## When / Where

Wednesday, 19 November 2003, 10:40-11:30 CST

CEBA 3140 (Here)

## Conditions

Closed Book, Closed Notes

Bring one sheet of notes (both sides), 216 mm × 280 mm.

No use of communication devices.

## Format

One or two medium-sized problems, short answers.

## Resources

Solved tests and homework: <http://www.ece.lsu.edu/ee4720/prev.html>

Study Guide: <http://www.ece.lsu.edu/ee4720/ssched.pdf>

## Study Recommendations

Study this semester's homework assignments. Similar problems may appear on the exam.

Solve old problems.

Memorizing solutions is not the same as solving.

Following and understanding solutions is not the same as solving.

Use the solutions for brief hints and to check your own solutions.

## Emphasis

Implementation Diagrams and Pipeline Execution Diagrams

They are a *team*, so study them together.

## Instruction Use

There will not be a programming problem per se ...  
... but must know what programs do.

## Statically Scheduled Pipelined MIPS Implementations

Unpipelined Implementation

Pipelined Implementations

Basic (2-cycle branch penalty).

Zero-cycle branch penalty.

Bypassed.

Dependency Definitions

Hazard Definitions

For a Given Pipelined Implementation

Show pipeline execution diagrams.

Show register contents at any cycle.

Determine control hardware.

Determine CPI.

## Interrupts and Exceptions and Traps

Difference between interrupt, exception, trap.

Causes of exceptions, role of handler.