Call Number 7351 (Fall 1998)

URL: http://www.ee.lsu.edu/tca

Offered by:
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   Tentative office hours: Monday, Thursday 13:30–16:00

Should already know:
   How to design a computer.
   How to design a good computer.

Will learn:
   How to design a better computer.
Prerequisites By Course:

EE 4720, Computer Architecture

Prerequisites By Topic:

- Logic design.
- Computer organization.
- Assembly-language programming.
- Computer architecture.
- C programming.

Text

“Computer architecture, a quantitative approach,” John L. Hennessy & David A. Patterson, Second Edition. (One or two chapters used.)

Technical papers. (Many will be linked to web site.)
Course Content

- Simulation and instrumentation techniques
- Branch and data prediction.
- Advanced implementation techniques.
- Prefetch and advanced caching techniques.
- Symmetric multiprocessing (shared memory computers).
- Multithreading.
- Non-standard control-flow machines.
- *And more!* (Time permitting.)
Graded Material

Midterm Exam, 35%

Fifty minutes, open book.

Final Exam, 35%

Two hours, open book.

Homework and Mini-Projects, 30%

Lowest grade or unsubmitted assignment dropped.
Mini-Projects

Analyze or simulate some architectural feature.

Use real research tools.

Examples:

   Test new branch prediction technique.
   See how useful a new instruction would be.

But won’t that be hard?

   Not that hard.
   Programs for similar problems will be provided.