Computer Architecture and Embedded Systems Syllabus
Advancement to Candidacy Oral Exam

1. Computer Architecture
   - Performance Evaluation
   - Pipelining
   - Instruction Level Parallelism and its Dynamic Exploitation
   - Floating-Point Arithmetic
   - Memory Hierarchy

2. Design and Synthesis
   - System Models and Languages
   - HW/SW Codesign - Partitioning, Scheduling, etc.
   - High level synthesis (scheduling, resource allocation, resource sharing)
   - Logic Synthesis (two-level, multi-level optimization)
   - Physical Design (partitioning, floorplanning, placement, routing)

3. Compilers
   - Syntax-directed translation
   - Run-time storage management
   - Flow analysis and code optimization
   - Code generation
Recommended Courses

- CS 250A - Computer Systems Architecture
- CS 244 - Introduction to Embedded Computer Systems
- CS 252 - Introduction to Computer Design

Reference Books