

Detailed Planning of Embedded Parallel Computing (DO 8003), spring 2011

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This is the preliminary plan for the course. It will be updated during the course of the course. Tomas Nordström will hold the Lectures L_n and Seminars S_n , while the Laboratory and Project lectures P_n will be held by Zain-ul-Abdin.

Lecture	Date	Time & room	Content
L1	2012-01-16	13:15-15:00, R3149	<i>Lecture 1: Introduction to Advanced Computer Architecture and Parallel Processing</i> Course introduction. Scan through Ch 1+3 in [ACAPP]. Problems to solve: Ch1: 4, 6, 10. Ch3: 5, 6, 8.
L2	2012-01-18	10:15-12:00, D215	<i>Lecture 2: Parallelism in microprocessors</i> Discuss content of Lecture 1. Overview of parallelism found in today's microprocessors including SIMD extensions. In reading, you may pay less attention to Sections 3.3 and 3.5,
L3	2012-01-26	10:15-12:00, R3149	<i>Lecture 3: Multiprocessors Interconnection Networks</i> Discuss content of Lecture 2. Scan through Ch2+Ch3.3 in [ACAPP]. Problems to solve: Ch 2: 2, 4, 10-14. Ch 3: 1
L4	2012-01-27	10:15-12:00, R3149	<i>Lecture 4: Multiple-instruction multiple-data streams (MIMD) parallel architectures</i> Discuss content of Lecture 3. Scan through Ch4 + Ch5 in [ACAPP]. In reading, you may pay less attention to Sections 3.5, 4.4.3 - 4.4.5, 4.5.1 and 4.5.2.
L5	2012-01-31	10:15-12:00, R3149	<i>Lecture 5: The anatomy of a modern multiprocessor, the multi-core processors</i> Discuss content of Lecture 4. Scan through [Modern multi-core arch]
L6	2012-01-02	10:15-12:00, R3149	<i>Lecture 6: Fundamentals of embedded many-core architectures</i> Discuss content of Lecture 5. Scan through [single-chip many-core arch] Introduction to Ambric massively parallel processor on a chip [Ambric]
P1	2012-02-06	13:15-15:00, R3149	Lab and project preparation lecture 1 [Ambric] and [Ambric lecture 1]
P2	2012-02-09	10:15-12:00, D408	Lab 1 [Ambric Lab 1]. Note: MANDATORY!
L7	2012-02-15	13:15-15:00, R3149	<i>Lecture 7: Programming models and methodologies for parallel embedded processors</i> Discuss content of Lecture 6 and Programming Lab. Scan through Ch8 + Ch9 in [ACAPP] and OpenCL documentation Introduction to seminar topics.
L8	2012-02-17	13:15-15:00, R3149	<i>Lecture 8a: Energy Efficiency and Parallel Embedded Processors</i> Introduction to energy efficiency in modern embedded parallel processors <i>Lecture 8b: Group discussions of seminar topics</i>
P3	2012-02-17	13:15-15:00, R3149	Lab and project preparation lecture 2 [Ambric lecture 2]
S1	2012-02-20	13:15-15:00, R3149	Seminar Group Meetings (Group 1-5)
P4	2012-02-22	13:15-15:00, D408	Lab 2 [Ambric Lab 2]. Note: MANDATORY!
P5	2012-02-24	10:15-12:00, D408	Project introduction [Ambric Project].
	2012-02-27	13:15-15:00, R3149	
S2	2012-03-01	10:15-12:00, R3149	Seminar Group "Topic N". ALL: Read Introductory Text!!
S3	2012-03-02	10:15-12:00, R3149	Seminar Group "Topic N". ALL: Read Introductory Text!!
S4	2012-03-06	8:15-10:00, R3149	Seminar Group "Topic N". ALL: Read Introductory Text!!
S5	2012-03-08	10:15-12:00, R3149	Seminar Group spare