General Information

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| Name of Course | Computer Architectures II. |
| Course Code | PMRMINB329HA |
| Semester | 2017/2018 1. (Spring) |
| Number of Credits | 5 |
| Allotment of Hours per Week | 2 lectures and 1 practical lessons per week |
| Evaluation | Signature with grade |
| Prerequisites | Computer Architectures I. |
| Instructors | Dr. Géza Várady, Email: varady.geza@mik.pte.hu  Office: 7624 Pécs Boszorkány u. 2. Room: B109, Office phone extension: 23808  Péter Müller (practical instructor)  Office: 7624 Pécs Boszorkány u. 2. Room: B102 |

Introduction and learning outcomes

Computer Architectures 1. give a base for the next step in the structured computer architectures. The course goes from the Instruction Set Architecture (ISA) level to the operation system level and assembly level to give a good support for the programing levels of computers. The Operation System level main supporting functions (virtual memory, virtual I/O, process parallelism) are introduced from the lower, hardware side.

General Course Description and Main Content

This subject covers the fundamental principles of the structured computer architecture that is required to the study of students attending the B.Sc. program.

The subject of the course includes the followings.

* Instruction Set Architecture – grouping of instructions
* Parallel system setups
* Role of the operation system – main everyday tasks. Virtual memory strategies, virtual IO, process synchronization.
* Basics of assembly level – programing the CPU

Schedule for practical part in weeks:

1 -------------------

2 Introduction, Posh review

3 Using Shell, First steps

4 Help, and cmdlets

5 Iterations and loop

6 Iteration and loop

7 Compensation, Operators

8  --------------------

9  Writing scripts

10 Aliasing, Elastic sytaxs

11 Pipeline, Hash Table

12 Formats

13 Regular expression

14 Exam

15 Exam

Methodology

The course is based on the lectures with examples.

Schedule

The semester is divided into 14 weeks which follow the themes given above.

Attendance

Attending is not required but is strongly recommended. Preparation for the exams can be done according to the handout slides and the reference materials, although the course is part of the state exam for students.

Required Performance, Evaluating, Grading

The requirement is to make a midterm and a final exam scheduled for the 6th week and for the exam terminus in the theory part. The practical part is examined according to the weekly schedule above. The final grade will be the weighted mean of the two (60% theorem, 40% practical part). The grade of the examination will be based on the final exam grade.

5. Outstanding work. Execution of work is thoroughly complete and demonstrates a superior level of achievement overall with a clear attention to details. The student is able to synthesize the course material with new concepts and ideas in a thoughtful manner and is able to express those ideas in clear way.

4. High quality work. Student work demonstrates a high level of knowledge with consistency. The student demonstrates a level of thoughtfulness in addressing concepts and ideas. Work demonstrates excellence but less consistency than a ‘5’ student.

3. Satisfactory work. Student work addresses all of the task and assignment objectives with few minor or major problems.

2. Less than satisfactory work. Work is incomplete in significant ways and lacks attention to details.

1. Unsatisfactory work. Work exhibits several major and minor problems with basic conceptual premise, lacking both intention and resolution. Results are severely lacking and are weak in clarity and completeness.

Grading Scale:

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| --- | --- | --- | --- | --- | --- |
| Numeric Grade | 5 | 4 | 3 | 2 | 1 |
| Evaluation interval | 85-100% | 72-84% | 63-72 % | 50-62 % | 0-49 % |

Students with Special Needs

Students with disability and needs to request special accommodations, please notify the Deans Office. Proper documentation of disability will be required. All attempts to provide an equal learning environment for all will be made.

Recommended Reading and Reference Materials

* **A.S. Tanenbaum – Structured Computer Architectures**