System Modelling

Introduction

Course leader: Dr. PATARICZA András

Lecturer: HUSZERL Gábor
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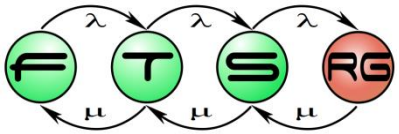
Budapest University of Technology and Economics
Fault Tolerant Systems Research Group



Schedule

- Classes
  - I E412, Tuesday 10:15-12:00 (every week)
  - I L405, Thursday 10:15-12:00 (every week)
    - approximately half of Thu classes will be seminars instead of lectures
- No classes on
  - 6. Oct, 1. Nov, 17. Nov
  - Last class on 8th Dec

Course requirements

- Mandatory
  - Homework
    - Phase1: Week7 (18th Oct.)
    - Phase2: Week13 (29th Nov.)
    - Result included in final mark
  - Mid-term exam
    - Week 14 (7th December) Wednesday 8:15-10:00
    - Room to be announced
- **Mark:**
  - **60 points (mid-term exam)+ 20 points (HW)**
- **Extra points** (optional):
  - optional HW (announced later)

Information Sites

- Home page

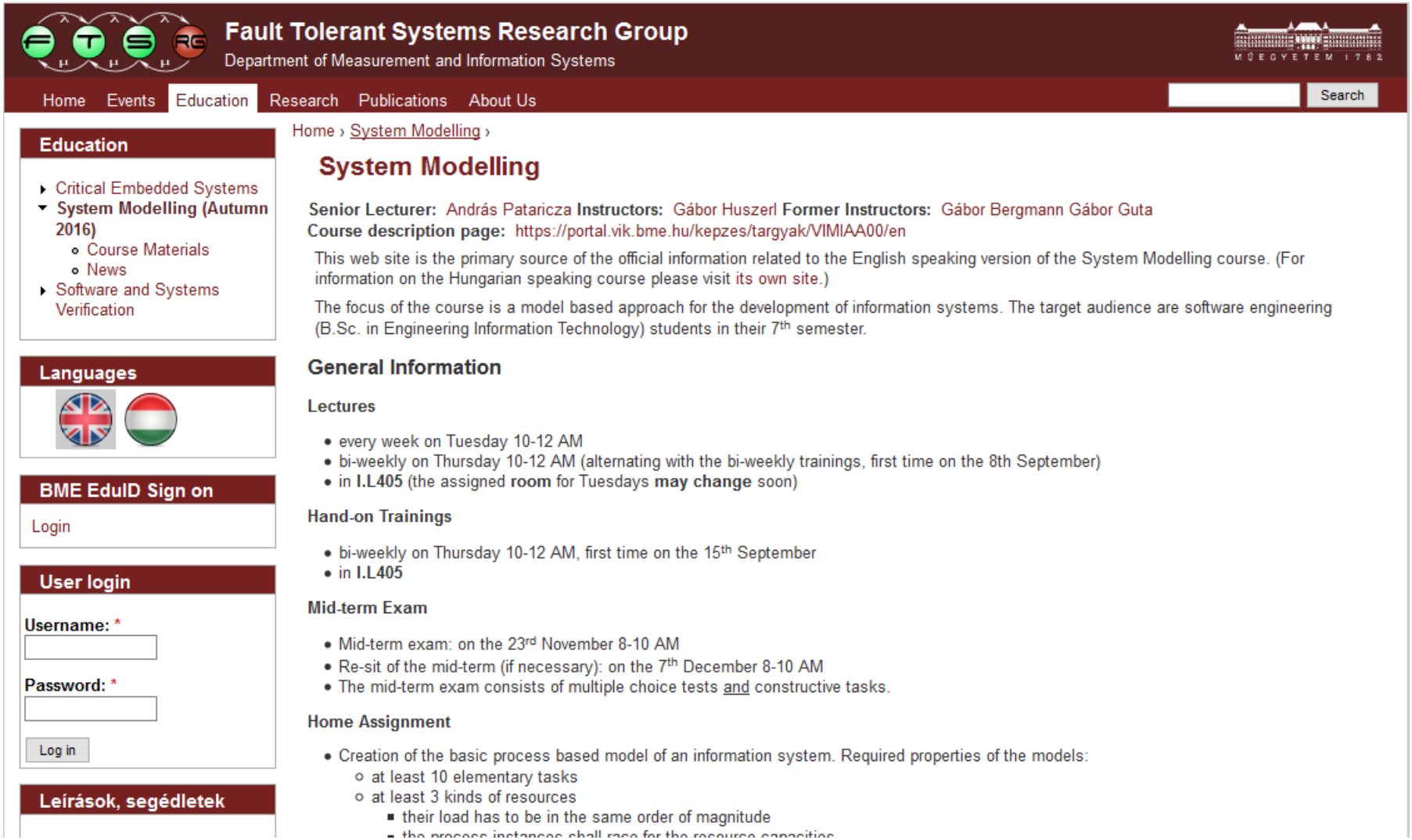
  https://inf.mit.bme.hu/en/edu/courses/remo-en

  - Lecture notes
  - News
  - Assignment submission
  - Results
  - BME EduID credentials →

    https://inf.mit.bme.hu/en/wiki/it-services-guidelines-students-ftsrg

- Questions-answers
  - http://q2a.inf.mit.bme.hu/
  - Contributions are welcome…

Homepage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System Modelling
Senior Lecturer: András Pataricza Instructors: Gábor Huszerl Former Instructors: Gábor Bergmann Gábor Guta
Course description page: https://portal.vik.bme.hu/kepzes/targyak/VIMIAA00/en
This web site is the primary source of the official information related to the English speaking version of the System Modelling course. (For information on the Hungarian speaking course please visit its own site.)
The focus of the course is a model based approach for the development of information systems. The target audience are software engineering (B.Sc. in Engineering Information Technology) students in their 7th semester.
General Information
Lectures
every week on Tuesday 10-12 AM
bi-weekly on Thursday 10-12 AM (alternating with the bi-weekly trainings, first time on the 8th September)
in I.L405 (the assigned room for Tuesdays may change soon)
Hand-on Trainings
bi-weekly on Thursday 10-12 AM, first time on the 15th September
in I.L405
Mid-term Exam
Mid-term exam: on the 23rd November 8-10 AM
Re-sit of the mid-term (if necessary): on the 7th December 8-10 AM
The mid-term exam consists of multiple choice tests and constructive tasks.
Home Assignment
Creation of the basic process based model of an information system. Required properties of the models:
at least 10 elementary tasks
at least 3 kinds of resources
their load has to be in the same order of magnitude

More on HW

- Modelling an “e-Business” system
- Resource modelling
- Analysis&simulation
  - Effect of changes in workload
  - Global performance constraints
  - Bottlenecks
- Resiliency of the system
  - Impact of resource level availability
- Sensitivity analysis
- Goal: try things in practice
- Assignments (topics) are generated
- Assignments will be available at the homepage
- Can be solved on student machine or in education cloud
  - You should start in time…

HW Scheduling

- Two phases
  - Initial model (Week7)
    - Assigned topic specified with requirements
    - Questions to be analysed
    - Process model + resource allocation
  - Final model + analysis (Week13)
    - Analysis questions answered
    - Document summarizes the results
    - **Oral defence on Week14**
- Software will be presented in class
- Technical questions
  - http://q2a.inf.mit.bme.hu/rendszermodellezés-405
- Late submission: Dec. 12. (fee)
  - Defence on that week