MST Technologies and Processes

Assignments WS 2018/2019

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Course material available via ILIAS

- course: MST Technologies and Processes
- Master MSE (Advanced Microsystems Engineering)
- password: mst

General remarks

- assignments are an integral part of the lecture
- they are the practical component
- each students is required to submit one assignment

→ completing an assignment is the prerequisite for signing up for the exam

→ students that do not complete an assignment will not be allowed to take the exam

The exam will take place on Monday, March, 18th, 2019.

What is an assignment?

- the assignment pool comprises ~ 20 different assignments
- each assignments consists of a task such as e.g., research a certain process, describe a certain protocol, explain to use a certain technology etc.
- an finished assignments consists of two components:
  - a short written report
  - a 10 minute presentation in front of the lecture

Assembling teams

- students group up in teams of 2-3 students
- single-person teams and teams with more than three members are in general not allowed unless with special permission
- once a team is assembled, one of the team member sends an email
  - to: bastian.rapp@imtek.de
  - topic: team assignment (MST Technologies and Processes)
  - list the member of the team with name and matriculation/ID number
  - I will send you an email back with the details on your assignment including the assignment number
  - keep the number for further reference

Report

- the team then researches the assignment and prepares a report (ca. 3-4 pages, a template will be provided)
- these need to be handed in by January 30th, 2019 to bastian.rapp@imtek.de, topic: assignment #NUMBER
- I will return the report with comments and requests for clarification
- rework the report according to the comments given and hand in a final version by February 15th, 2019 to

  bastian.rapp@imtek.de, topic: assignment #NUMBER
- I will then allocate a slot for the presentation of your assignment

→ at the end of the semester, all written reports will be made available to all students via ILIAS

→ the contents are a mandatory component of the lecture material and relevant for the exam

Presentation

- each team then prepares a short 10 minute presentation to be given in the course
- a PowerPoint template will be provided
- you may also use LaTeX/Beamer or similar tools
- stick to 5-6 slides
- a short Q&A session will follow where students and the professor may ask questions to clarify
- presentations will be given on January, 31st and February 7th, 2019 during the slot allocated
- all team members should be present although the presentation may be given by only one student
- bring your presentation on a USB drive on the presentation day or bring your own laptop

Files

Later today I will upload the following files to ILIAS

- this How-To
- template for report
- template for presentation

→ I will send out an email via the subscriber list

→ please also inform your co-students

Assignment #2: High aspect ratio MEMS

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Assignment

- high aspect ratio MEMS devices are required for a number of common applications
- name a few of the applications where high-aspect ratio structures are required
- what methods are available to make high aspect ratio MEMS structures
  - in metals
  - in polymers
  - in semiconductor materials