

Multibody Dynamics: Information regarding the examination

Version: 15. January 2025

General Information

- Date: see the official announcements of the examination office (German: Prüfungsamt)
- Duration: 120 minutes
- Passing grade: 40% of all possible points in the written part (8 out of 20 points) **and** 40% of all possible points in the computer part (4 out of 10 points)
- Topics:
 1. Generation of equations of motion using kinematical differentials,
 2. Generation of equations of motion using kinetostatic transmission elements,
 3. Generation of equations of motion for constrained mechanisms (loops).

Allowed auxiliary means

- All except communication devices (no laptops, no smartphones, no smartwatches, no calculators) and electronically stored material (no external disks with previously written files or programs),
- Matlab as well as Matlab's documentation (offline and/or online),
- Moodle-course webpage and its entire contents,
- Moodle-Exam course (to upload your solutions, if required).

Legal notice

- You may take exam if and only if you are listed in the official examination-office registration-list (German: Prüfungsamt) and can identify yourself with your student ID or an official identification document (identity card, passport).
- Any withdrawal from the exam participation should observe the rules and deadlines specified in the corresponding examination regulations (German: Prüfungsordnung).
- You may only take the exam if you feel physically able to do so. If you start feeling ill during the exam, you may withdraw from it after explaining your situation to the exam supervisor. The assessment of whether a health-related inability to take the exam existed will be made by the examination office based on a medical certificate (German: Attest). Please, follow the guidelines regarding the submission of medical certificates.
- The use of unauthorized aids as well as any form of communication between examinees during the exam (verbal or in writing) will be documented without warning as an attempt to cheat. This applies in particular to the following situations:
 1. Use of unauthorized aids (e.g. calculators, electronica devices, unauthorized notes),
 2. Activated communication devices (e.g. mobile phones, smartwatches, laptops), regardless of their location,
 3. Communication with other examinees during the exam (any exchange will be considered an attempt to cheat for all parties involved, regardless of the content of the communication and its initiation),
 4. Further writing after the exam has ended.

Preparation of your solutions to the exam tasks

- You should write your solutions exclusively on the provided paper sheets and worksheets. **Solutions written on the question paper or on your own paper will not be graded.**
- Your answers should be written with indelible pens of any color, except for pink, as this color will be used for correction. You may use pencils for your drawings.
- **Do cross out clearly solutions that should not be considered.** If two different solution approaches are provided for any exam subtask, the worse solution approach will be graded.
- Use exclusively the front side of the provided paper sheets and start each task on a new sheet.
- The stapled paper sheets may be unstapled.

Examination process

Before the exam

- Exam location, room layout, and start time will be announced on the webpage of the Chair for Mechanics and Robotics at least three days before the exam date. Depending on the number of participants and room size, you will be allowed to enter the room 45 to 15 minutes before the exam starts.
- You may choose your seat freely among all designated exam seats. Exam seats are recognized by exam materials lying on the desk in front of them.
- We recommend you to fill in the solution envelope and cover sheet as well as to write your name and student ID in all paper sheets and worksheets before the exam starts.
- Place your student ID or official identification document at the top right corner of your desk. This will be needed during the exam for the mandatory attendance control.

During the exam

- The exam starts after a brief welcome speech by the exam supervisor and the distribution of the question papers.
- No questions will be answered at your seat. For any issues during the exam, please come to the front desk and talk to the exam supervisor.
- Aiming at fair conditions for every examinee, no questions regarding the understanding of exam tasks or possible solution approaches will be answered. If you believe the question paper is incomplete or incorrect, you may communicate your objection to the exam supervisor at the front desk. Your objection will be documented for future reference. In the unlikely event that additional information is required to solve any exam task, this information will be made available to all examinees in all exam rooms.
- **If you need to use the restroom during the exam, come to the exam-supervisor front-desk with your student ID.** You may need to wait until the restroom is available.
- Additional paper sheets will be available at the exam-supervisor front-desk. You may collect them at any time.

After the exam

- The end of the exam will be announced by the exam supervisor.
- Stop writing immediately after the exam ends. **Any further writing will be considered an attempt to cheat.**
- **Keep in mind that you will hand in two objects: the solution envelope and the question paper.**
- First, pack all paper sheets and worksheets into the provided solution envelope. The solution envelope should not be sealed.
- Then, pack all your belongings so that the solution envelope and question paper are the only objects left lying on your table. **Remain seated** until the exam supervisor instructs you to leave the room.
- When leaving, hand in your solution envelope and question paper to the exam supervisor.

We wish you a well-deserved success!

Chair of Mechanics and Robotics