



OPERATION & MANAGEMENT OF TRANSPORT SYSTEMS

FALL 2024– 250MUM012

FINAL EXAM

Tue. Jan 7th, 2025 - @17:00; A2-204

INSTRUCTIONS FOR THE FINAL EXAM

Please arrive 5 minutes early and wait outside of the room to be seated.

Exam contents

The exam will include all the concepts seen in the course. This includes the following topics: "Introduction to transportation operations", "Time-space diagram", "Trajectories", "Scheduling applications", "Queuing processes", "Flow conservation", "Traffic diagrams", "Continuum traffic flow theories", and "Microscopic traffic flow modelling".

Exam structure and regulations

The exam will consist of 3 parts.

- Part 1 => True or False questionnaire. 26 questions. 15 minutes. 26 points. Correct answer +1; Incorrect answer -0.5; Blank 0.
- Part 2 => Multiple-choice questionnaire with calculations. 12 questions. 30 minutes. 24 points. Correct answer +2; Incorrect answer -0.5; Blank 0.
- Part 3 => 1 problem with 2 main parts. 1 hour. 50 points.

You are allowed to use only **one sheet of hand-written notes**. All other written or electronic material must be left aside. You need to work on your own. Evidences of cheating will be severely penalized.

Each part will be independent of the other, and will require independent submission. So, you will need to submit 3 tasks. There will be a 5 minute break between parts 2 and 3.



Exam submission

Parts 1 and 2 – Questionnaires

- You will need a computer. Please **bring your laptop to the exam**.
- We are going to use the Atenea questionnaire tool. This allows to use a randomized set of questions, with different permutations of questions and answers for the different students.
- You will visualize the questions one by one, and the answers provided so far while completing the questionnaire. You can navigate through the different questions freely. Before submission, you can return to any question and change your answer as many times as you wish. Once you have checked one option, if you want to leave the question blank you need to click at “*esborra la meva selecció*”.
- You need to pay close attention to the allowed time. There will be a countdown in the questionnaire. I recommend using the last minute before the end to have a general look at the answers provided and take final decisions. When the time is over, the questionnaire is automatically submitted.

Part 3 – Problem

- You will need to hand in a handwritten solution using the provided answer sheets, together with the exam statement signed.
- Number all the sheets of your solution as: 1 of 3
- Be sure to show all your work. Emphasis must be given to concepts and graphical representation of the solutions.