



University of Bergen
Department of Informatics
Exam in INF273, Meta-Heuristics, Spring 2020

The final exam for INF273 will be in the form of digital home exam, in addition to a live session on Skype.

- In the final report (digital home exam), you should submit your codes along with a PDF file before the deadline.
- In the live session, you will share your screen and run your algorithm (the submitted version) on the new instances that you get after the deadline.

In the final report, you should implement a metaheuristic algorithm to solve a pickup and delivery problem with time windows (the same problem we had through assignments 2 to 5).

- You are totally free in the design of your algorithm.
- The only limitation is the running time which has been explained below.
- After submission, you are not allowed to touch your codes anymore.
- You should provide the system configuration. In case your machine is slower than the others, you can ask to run your code on my or the TA's machine.
- The sharp deadline to submit the final report (Codes+PDF) is on May 15th, 2020 at 15:00.
- You will receive an announcement with a link to doodle on Friday (May 1st) at noon, to choose your time slot for the live session. The time slots will be on week 21 (from May 18th to 22nd, 2020). In case, these dates are not working for you (for a valid excuse), I will provide you another time slot.
- In the live session, you will run the submitted code on the new instances. You get 5 minutes to setup, 10 minutes to run, and 5 minutes to report and check the objective value and the feasibility of the results with me. Infeasible results may put you in trouble!
- The 10 minutes of running time should be distributed among the 5 instances as follows: 10 seconds for instance one (the smallest instance with 7 calls), 20 seconds for instance two, 50 seconds for instance three, 120 seconds for instance four, and 400 second for instance five (the largest instance with 130 calls). I recommend you to put a stopping criteria based on the running time!
- In the final report, you run the algorithm on the 5 old instances that you have. Like assignment 3 to 5, you will run your algorithm 10 times and you fill the table of results for each instance. Make sure the running time of your algorithm, for one time run on each instance, is within the above limit.
- Note that in the live session you only run your algorithm one time for each instance. Therefore, you will not have an average result.
- In the PDF file, after filling the table of results (in the given format as below) and reporting the best solutions, you should explain your algorithm in short.
- You should submit your report and codes in one single .zip file in Mitt.UiB.
- Read all the bullet points above one more time!

Instance name (e.g. Call 7 Vehicle 3)			
	Average objective	Best objective	Average Running time
Results of your algorithm			