Course Report WASP Graduate School

Date: 2025-08-13
Authors[1]: Farnaz, Johannes

Reinforcement Learning, 6 hp
Semester: Fall 2024

Number of registered students: 59
Answering frequency (course evaluation): 14/59 = 23%

Examination results

Number of students registered at the end of the course: 58 (one official drop out)
Fail / incomplete: 18/58 = 31%
Pass: 40/58 = 69%

Note 1: Two students are still actively trying to pass the course and are delayed for valid reasons.
Note 2: There seems to be a number of students who did not try to complete the course and did only attempt 0 or 1 of the assignments. We assume that these students dropped out of the course early and failed to inform the teachers and graduate school administration about this. The number of these students is 14. If we correct for these assumed drop-outs, we have the following examination results.

Number of students active at the end of the course: 44
Fail / incomplete: 4/44 = 9%
Pass: 40/44 = 90%

Note 3: The main reason for failing is not completing the exercises.

Brief summary of student viewpoints and suggestions

Results of WASP base-line quantitative questions

- What is your overall rating of the course (1-5)
  3.93/5
- Did you enjoy the course? (1-5)
  3.79/5
- Was it time well spent? (1-5)
  3.93/5
- How did you find the workload in the course? (1-5)
  4.21/5

[1] *The report should be written by the examiner together with the teachers and possibly others, such as teaching assistants*

- Would you have preferred to attend all four modules instead of just three? (yes, no)
  Yes: 21%. No: 79%

Answers to the additional question: In case you haven't completed the course yet, what would have helped you to complete the course on time? (free text)

- A sparser schedule in the fall semester
- Less workload
- Being more prepared for RL

Answers to free text-questions to be (shortly) summarized under "Strengths" and "Weaknesses"

- What was the best aspect of the course?
  - The students liked the lectures, labs, theoretical assignments and simple coding tasks.
  - It was good to implement the algorithms.
  - Flexibility on when to hand in the programming assignment helped.
  - Reading material in advance (actual books and articles instead of slides).
  - Diversity of the topics.
- What would you suggest improving?
  - A lower workload can help. The students felt that writing a reflective journal took much time from them. A better motivation for theoretical assignments.
- What advice would you like to give to future participants?
  - Attend the lectures, plan ahead, read the material, keep up writing the journal, work on the math parts
- Other comments. Is there anything else you would like to add?
  - Teachers were good, the course was interesting and useful, and the math exercises were difficult.

"Strengths" according to students[2]

- Coding experience on RL, labs
- lectures
- reflective journals, theoretical exercises

- well structured course

"Weaknesses" according to students[1]

[2] *Based on both quantitative results and key viewpoints from students' free-text answers*

- The survey reports high perceived workload.
- Lack of clarity on what assignments are mandatory.
- Reflective journal tasks take time.

- The course is too short and should be stretched out over a longer period.

- Many students did not participate in the group work for giving feedback on the reflective journals (unlike in previous iterations of the course).

Comments from teachers on the implementation and outcome of the course[3]

- This course round was the first instance where the course was split into 4 modules in which the students take either the first three or the last three. This setup was developed as a response to the demand to provide an RL course for students on different levels of studying RL. Our observation is that this setup is suitable to address the issue, but that it creates scheduling and workload issues (for the students and teachers).
- Our observation is that the students who passed the course obtained a good advanced level of understanding of RL and we got some feedback that the course was useful in their further PhD studies.
- We also observed that students who attend the meetings usually pass the course without issues.
- The course aims at understanding from first principles in RL and might therefore be unsuitable for students who just want to get a glimpse of what RL is and who have no prior exposure to ML. Perhaps the course description should more clearly reflect that to address a mismatch in expectations.
- The course uses both theoretical exercises, practical exercises (programming assignments), and reflective journal assignments (i.e. self-study and literature reading). We consider all three necessary, also to keep the students engaged between the meetings.
- This course uses self-study assignments between the course meetings and the course meetings assume that students have completed the self-study assignment to be prepared. We observed that skipping the self-study assignments is not unusual, which leaves students under-prepared. Accepting a regular weekly workload between the course meetings seems to be challenging to a subset of the students.
- The survey reports high perceived workload. However, according to plan, the number of assignments did not increase nor did the level of difficulty. In comparison to the last course round, the schedule was more tight and students reported that they had many other tasks and courses.
- We observed that a number of students were inactive in the course. This means that these students did not complete more than 1 assignment. Many of these did not complete any assignments. We did not track student attendance at the meetings by name, but we observed a mismatch with the number of attending students and the number of registered students. This suggests that

[3] *Including changes effected during the course*

students are registering for this course but later do not participate. Our understanding is that students must un-register from the course in this case, but this does not seem to happen.
- We more often than in previous iterations of the course observed students skipping parts of meetings (e.g. arriving late on day 2), leaving for doing other tasks, or working on other tasks during lectures and group work. This suggests that students have difficulties prioritizing the course over other tasks.
- The planning of the on-site meetings was difficult due to the WASP calendar as well as avoiding clashes with major conferences and events. The course ran from Aug 2024 till Feb 2025 while it should have fit into 2025.
- Planning and scheduling the course was also difficult due to the lack of suitable and available venues and the planning horizon. At ORU, for example, scheduling for the semester was done centrally a long time before the WASP course could be organized and it was difficult to find rooms for the course and empty whole days from the teaching schedule.

Proposed changes/comments/measures

- Try to design a better schedule. The course has to, in total, fit in 9 credits into the period between August and December. Perhaps this is not possible. Additionally, the course should have more weeks without assignments so that students can catch up if they have to miss something due to other tasks.
- Make more clear that journal / reflection assignments are imperative for being able to follow the on-site meetings. Skipping these assignments is not a good idea.
- Make the list of mandatory assignments more clear.
- The course page on CANVAS makes use of the built-in function for providing a summary view of all assignments assigned to each student depending on their module combination. We will update the course page to show this information on the main page as well.
- In order to manage the teacher’s workload better, teaching and planning of the course should be spread out over a longer time interval. For this, the decision letters for teaching should be provided earlier.
- While it is not clear what would be the consequence for registered students, we might have to take attendance at each course meeting to check if students are participating in the course.