Possible Honours Examinations at the End of Semester 1

This is a response to the paper to be tabled by Michael Rovatsos at Teaching Committee on Wednesday 4 December, which itself discusses issues raised a number of times in previous years. This is not a complete and final proposal; in particular, it has not been passed to year organisers, project and large practical organisers, or our external examiners. Any outcome from the Teaching Committee meeting should be reviewed by these parties before a final decision is taken. However, it does address some issues not covered in the paper tabled.

Ian Stark 2013-12-04

Current Semester 1 Timetable

The university calendar for Semester 1 has 11 lecture weeks followed by a three-week period without lectures or coursework. In Informatics honours teaching, years 3 and 4, we use these three weeks for extended practical work: in third year for the Large Practicals in AI, CS and SE; and in fourth year as a dedicated period for project work. While both these practical and project courses also run during the main body of semester, allocating them a specific period at the end of semester gives students more time during lecture weeks to attend to their lectured courses.

Informatics pre-honours courses, in years 1 and 2, use the three-week period at the end of Semester 1 for revision and exams. Currently all Honours exams are held during the four-week summer exam period following Spring vacation.

When we have visiting undergraduate students who are in Edinburgh only for Semester 1, lecturers must set an additional VUG exam paper to be taken in December. This only affects courses where there are such students, but it does routinely arise: this year we have eighteen VUG exams. Previous attempts to lift this requirement have failed: College will not permit us to turn away single-semester visiting students; and the University will not allow students to sit exams away from Edinburgh. The latter has been relaxed recently, however, with a trial last summer for some students to take resit examinations in their home country; so there may yet be progress on this.

Motivation

The paper tabled highlights the regular student complaint about workload in the May diet — up to eight exams in four weeks — and moving some of these to December should reduce this.

Michael does not mention avoiding VUG exams as a motivation, but I think it is clear this would be a benefit to the staff involved.

The paper claims that holding May exams “…also causes to students to focus on last-minute revision (“cramming”)”. I don't agree that moving these exams to December helps with this; rather, it institutionalises it.

The paper also states that “Examination in December is already possible for MSc-only courses (“normal year taken 5”), even if these are open to year 4 students per DPT”. This is not quite correct: no MSc-only courses are open to year 4 students through the DPT; and where courses are shared across year 4, 5 and MSc students (identified as “year 4 level 11”) they must fit the year 4 examination constraints.
Large Practicals and Honours Projects

At the moment the weeks at the end of Semester 1 are dedicated to work on large practical courses (year 3) and undergraduate projects (year 4). If these weeks are instead used for examination, then we need to change the implementation of those courses accordingly.

Year 3 Large Practicals

This year these have a final submission deadline of 20 December, the last day of semester. If we assign the December diet to third-year exams and move the large practicals into the teaching block, then the deadline would be at least two weeks earlier and students would have less time overall to spend on the practicals.

I think this would be a distinct loss. However, even at a reduced length, these practicals might still fulfil much of their role in providing students with experience of implementing a coherent application over an extended period, giving practice in programming, planning and reporting, while serving as preparation for the group project in the following semester.

Year 4 Undergraduate Projects

As honours projects run from September to April, the three-week dedicated period at the end of Semester 1 is well-placed for students to consolidate and review their work. The course guide encourages this, and student reps at the time identified its introduction as a key improvement in course management by the School.

These three weeks currently provide 25–30% of the hours available for project work during the year.

If the December diet is lost to year 4 exams, then we might look to correspondingly delay the project submission date. Unfortunately, there are difficulties. Hand-in is currently on Thursday on the last week of Semester 2, before Spring vacation, with students giving demonstrations on their return just before exams. Postponing hand-in to immediately after the vacation would give extra time for some students during the final write-up: but without staff supervision, and not for students taking paid employment or intern positions over Easter. I think the loss of supervision during final write-up is particularly problematic: most students will be away from Edinburgh, as well as many staff.

I think the most practical route in this case would be to explicitly reduce the expected scale of projects. This has anyway been proposed previously, for different reasons, and would also reduce the student workload mentioned as a motivation for these changes.

At the moment our course guide states:

The report should usually be between 30 and 60 pages long (and no shorter than 20 pages)…

One way to reflect a reduction in scale would be to revise this to a guideline of 25–50 pages, with 20 still a minimum.

Course Hours

Planning to condense courses so they run entirely within Semester 1 sharply exposes the flaws in micro-mapping individual course hours to SCOTCAT credit points. The University of Edinburgh academic year runs for 32 weeks, which matches its rating at 120 credit points for 1200 working hours. At this level, the standard 1/10 ratio works. However, that year includes induction week, innovative learning week, and all other student activities not linked to specific courses. As a result,
the same ratio cannot apply to individual courses, much less any supposed hour-of-effort-to-grade-percentage rate for pieces of assessed coursework.

In particular, fitting complete courses, lectured and examined, within the 14 weeks of Semester 1 gives around 85 hours to each of six courses: roughly 6 hours a week for a course with lectures and exams, or 7 for one assessed entirely during the teaching block; and twice those numbers for a double-weight course. I realise that individual students may study longer hours, even much longer; but I don't think it is reasonable or responsible for us to set that as our baseline requirement.

**A Possible Implementation**

Taking into account the issues listed, below I illustrate one way we might move to December examinations in year 3 and 4. If this were to be trialled in stages then I would strongly suggest starting with a complete shift of year 3 only, rather than moving some courses from both years. This delimits the initial impact, and also simplifies it — our system is already quite complex enough.

**Year 3**

- Move all Semester 1 courses to examining in the December diet.
- Move AI/CS/SE Large Practical submission deadline to the end of week 12 and reduce the scale of the practical work accordingly.
- Remove explicit mention of “100 hours” from the course guide for the large practicals and other Semester 1 courses; replace it with the following recommendation:

  During Semester 1, third-year students should expect to spend an average of at least 7 hours each week on the large practical, up to its submission in week 12, and 6 hours on each of the other five taught courses.

Note that undergraduates may take some of these courses only in year 3 (the level 9 ones) and others in either year 3 or 4 (the level 10 ones). For examination purposes these are grouped by the earliest year they can be taken.

**Year 4**

- Move all Semester 1 courses to examining in the December diet.
- Reduce the scale of work expected in the Honours Project, in particular changing the page recommendation as follows:

  The report should usually be between 30 and 60 pages long (and no shorter than 20 pages)…

- Remove any explicit mention of “100 hours” from Semester 1 course guides; replacing it with the following recommendation:

  During Semester 1, fourth-year students should expect to spend an average of at least 13 hours each week on their project, and 6 hours on each of the other four taught courses.

Again, students may take some of these courses only in year 4 (the level 10 ones) and others in either year 4 or 5 or MSc (the level 11 ones). For examination purposes these are grouped by the earliest year they can be taken.
Pedagogy

So far I have only mentioned possible positive and negative effects of earlier exams on practical aspects of course delivery, rather than their impact on teaching and learning. In fact, I think the effect will be to weaken our assessment of students and the quality of their learning. However, I'm separating out these pedagogical aspects as I believe this is where there is most likely to be contention.

Clearly whether we hold exams in December or May we will succeed in giving marks to students, passing some while failing others, and assigning grades to all. My concern is the extent to which that process satisfies the aims of our assessment.

I recognise that examination directly at the end of semester is widely used in many places, notably in North America and other areas where assessment has traditionally been norm-referenced — seeking to rate a student's performance within their class (this includes classic “grading on the curve”, but also many other methods). For norm-referenced assessment, immediate examination is an appropriate method, as are continuous accumulation of weekly marks, attendance and submission records, and other techniques used to identify A-grade students.

However, the situation is different for criterion-referenced assessment, where the principle aim is to identify how well a student can demonstrate the knowledge and skills taught in a course. In this case there is distinct benefit in assessing whether students can consolidate what they have learnt and usefully apply it after time has passed.

In either setting, of course, specific exams may be better or worse at fulfilling these aims, and none will be perfect. Nor do these approaches entirely exclude the other — obviously, even the most aggressively curve-graded test should also check that high-scoring students do in fact achieve the learning objectives in the curriculum; and criterion-referenced assessment can also support highly selective performance ranking.

However, I think that the difference in approach and expectation goes very deep, affecting almost every part of assessment practice. Without being aware of that difference, we risk trying to misapply techniques from one objective to achieve the aims of the other.

In the particular case of teaching Honours courses September to November for examination the following May, I think our students gain real value in the additional time to bring together what has been taught, and we get a more effective assessment of what they have learnt. In particular, it highlights how well they can apply that learning after the course is well past, which is exactly what later courses depend upon.

It's a commonplace to observe that some students do much better in exams placed immediately after a course than in ones later in the year. At the moment we have a system that acknowledges the performance of those students who retain their learning longer; I think we will lose by removing that distinction.