Proposed assessment structure for Inf1A FP Philip Wadler

(With thanks to Paul Anderson, Michael Fourman, Judy Robertson, and Volker Seeker for suggestions and feedback.)

The existing structure is as follows. Marks are given as a percentage of marks for Inf1A FP, which is half the total for Inf1A. The other half come from Computation and Logic, taught by Michael Fourman.

(a) Lectures. - In 2019-20, attendance fell off badly. Questions on Piazza suggest many students neither attend lectures nor view the videos later. [0%]

(b) Tutorials, - One per week. Students are expected to do the tutorial in advance. Students are encouraged to work together. No points are assigned for tutorials, so they understand the purpose is to learn. Informal feedback on assigned work from tutors. Up to and including 2017-18 we used tutorials of about ten students, and most students did the work in advance. In 2018-19 we moved to tutorials of about 60 students, and the number of students doing the tutorial in advance fell off sharply. This year we moved back to tutorials of about ten students, but still had few doing the tutorials. [0%]

(c) Class exam,- Offline in class. If students are benefiting from too much help in tutorials, this is their chance to find out. [10%]

(d) Final exam, online in exam conditions. This year we had so many students that there were three separate sittings, requiring three separate exams. Despite our efforts to set three different but equivalent exams, we saw different performance on the three sittings. [90%]

Class exam and final exam are marked by marking parties of a dozen or more students, lasting 4--8 hours. Marking is according to detailed guidelines, with myself in room at all times to deal with unusual cases. The problems with attendance, with students doing the tutorials, and with setting a uniform final suggest we consider an alternative model of assessment. The proposed structure will:

(a') Encourage participation in lectures, by awarding marks for answering in-class quizzes. Marks are for answering, not for correct answers. [10%]

(b') Encourage tutorial participation, by awarding marks for tutorials. Submitted in advance, by submit command. Tutors will mark during the tutorial on a simple scale (e.g., no or little work, some work but short of solving the main tasks, most main tasks solved, most main tasks solved and most of the advanced tasks solved), and also give more detailed feedback in person as currently. Could either keep current small tutorials (ten students in a room with one tutor) or move to large tutorials (60 students in a room with several tutors). [40%]

(c') To let students (and us) assess how well they are doing, they get a take-home class exam midway through the term. Done online at home via the submit command. Students are intended to do work themselves without help. [10%]

(d') Students will get a take-home class exam at end of term. Done online at home via the submit command. Students are intended to do work themselves without help. [40%]

We will take a number of steps to discourage plagiarism. First and foremost, we will explain to students that marks for first year do not contribute toward their final degree: the purpose of first-year is to learn the material to establish a foundation for good marks in future years. They will be told the class exam and the final exam are as much about them assessing their own work as us assessing their work. In tutorials, each week a few students will be asked to explain their solutions to the tutor and other students. Anti-plagiarism software (such as MOSS) will check for submissions with similar code. For tutorials, but not exams, we will let students work together if they state who they are working with.

Marking for class and final exam can be by marking party, as before. I propose to keep the scope and difficulty of tutorials, the class exam, and the final exam similar to currently, to ease comparison across years. Once we are familiar with the new approach, it may make sense to move to harder class and final exams, taking advantage of the lack of a time limit of one or two hours.

Except for the quizzes, this approach does not require creating a lot of new material. We already know how the students cope with this material, so there are fewer variables to worry about.

One issue with (a') is that I am told the wifi in the George Square Lecture Theatre is not adequate to support Top Hat for the entire class. We will need this technical aspect investigated as a priority.