1. **Background**

The Teaching Programme Review (TPR) panel for Informatics in the 2008 round were critical of the high failure rate for some Mathematics for Informatics courses taught in 2007/2008.

2. **Possible responses**

In response to this the School of Informatics could:

1. do nothing—ignore the recommendation from the TPR and the perceived problem;
2. teach the Mathematics for Informatics courses itself—as suggested by the TPR; or
3. create some new Informatics courses which could be taken as alternatives to the Mathematics for Informatics courses.

3. **Discussion**

Of these three possibilities:

1. doing nothing seems too little—there appears to be a problem;
2. having Informatics teach the courses does not obviously solve the problem—it does nothing to address the difficulty of the content; and
3. creating new courses is time-consuming and might not solve the problem either.

4. **Recommendation**

This paper suggests that we follow option (3) above—create new courses as an alternative to the Mathematics for Informatics courses.

5. **Template**

The existing Computational Foundations of Cognitive Science 1 would serve as a template for these new courses. From the DRPS page:

“This course is designed to teach students the computational and mathematical approaches that form the quantitative foundation of cognitive science. The mathematical content of the course includes basic linear algebra and an introduction to probability. All mathematical and computational content is supported by putting it in the context of a cognitive science application. Computational tools,
such as Matlab, will play an important role in the presentation of the course.”

6. Possible new courses

Here are some possible new course titles.

- Foundations of Databases
- Foundations of Programming
- Foundations of Computer Security
- Logical Foundations of Informatics
- Foundations of Computational Modelling
- ...

The distinction with our existing Mathematics for Informatics courses is that these new “Foundations” courses would use computational tools and assess via programming exercises instead of pencil-and-paper exercises.

7. Outcomes

We might use the new courses to allow us to make a distinction between the BEng in Computer Science and the BSc in Computer Science, thereby addressing another criticism made by the TPR, that these were just two different badges for the same degree. The BEng degree would remain unaltered and the BSc degree would allow students to take the “Foundations” courses as an alternative to the Mathematics for Informatics courses.

It is possible that we could also introduce new degrees such as Computer Science with Mathematics (as opposed to Computer Science and Mathematics).