

# Summary of Amendments to Computer Science B.Sc. Curriculum

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## 1 Requirements for a Major in Computer Science

A revised curriculum for the Computer Science major has been approved for offer starting in academic year 2005/2006. This document outlines what these changes are, and how they may affect students who are now in the advanced part of the programme.

In order to satisfy the requirements for a major in Computer Science, a student must have achieved passes in the following courses:

- CS11A and CS11B
- CS20S, CS20R, CS27Q
- Either CS23Q **OR** both CS21S and CS21R
- CS39Q

The above courses are considered the core of the curriculum. Note that CS21S and P24K are equivalent courses, therefore students reading for both Electronics and Computer Science majors are encouraged to opt for the CS21S, CS21R sequence, but that is not required. (Electronics and Computer Science double majors essentially have a choice between CS21S + CS21R or P24K + CS23Q).

Other students, who may not be Electronics majors, but wish a more in-depth treatment of computer hardware are also encouraged to take the two-course sequence instead of CS23Q.

A student is still required to obtain a minimum of 16 credits from level 2 and a further 16 credits from level 3, in order to complete the requirements for the major. This essentially means that students must now do a minimum of three (3) level 3 courses in addition to the core courses in order to complete the programme.

## 2 Requirements for the Computer Studies Option

The changes to the Computer Studies Option take into account the discontinuation of CS28A, the change in prerequisites of CS31A, and the additional level 2 core courses required in the Computer Science major. In short, CS23Q replaces CS28A as a required course, and CS27Q is added to the set of required level 2 courses, thereby reducing the number of elective courses in the programme by 1.

The new requirements are:

- CS11A, CS11B, M10A, M10B (or good grade in M10C), EC10C, EC10E and (MS15D, MS15B) or (SY13A, SY13B)
- CS20R, CS20S, CS22Q, CS23Q, CS27Q
- CS31A, CS35A, CS35Q
- 4 additional credits at level 3
- 24 additional credits from level 2 or 3 chosen from Computer Science, Mathematics, Economics and Management Studies.

### 3 Guidelines for Students Transitioning Between Programmes

A number of course equivalents between the old and new programme have been set up for the purposes of facilitating pre-requisite substitution, and establishing anti-requisites across the programme. These equivalents have been designed to facilitate students who have started in the old programme, but may need to access courses from the new programme. For example, this can happen when a student has failed a discontinued course, such as CS28A, but would like to take a course that depends on it, such as CS31A.

Discontinued Course	New Version(s) (anti-requisite(s))
CS20A	CS20R
CS20Q	CS20S
CS21Q	CS23Q, CS21S, CS21R
CS28A	None

CS21Q is an anti-requisite of CS23Q, CS21S and CS21R. In other words, if a student has already taken CS21Q, he should not register to take any of CS23Q, CS21S or CS21R because he would not receive credit for them. On the other hand, CS21Q may be used as a substitute pre-requisite for any of those courses (i.e. CS23Q, CS21S or CS21R).

#### 3.1 One-Time Adjustment of Pre-requisites

A few courses have survived the transition from old to new curriculum, but their pre-requisites have changed. In particular, CS31A, CS32Q and CS39Q are in both programmes, but with different pre-requisites. In some instances, students from the old programme do not currently satisfy the pre-requisites for these courses, but they would satisfy the future pre-requisites. Given that the newer pre-requisites are the favoured ones, we would like to facilitate students who would be disadvantaged by these discrepancies. For this reason, the following alternative pre-requisites will be accepted for academic year 2005/2006:

Course	Permissible Pre-requisites for 2005/2006	Comment
CS31A	CS20A + CS21Q	CS21Q accepted in place of CS28A
CS32Q	CS20A + CS21Q	CS21Q accepted in place of CS28A
CS39Q	CS20A + CS20Q + 8 other credits from part II CS courses	old core + few to broaden perspective on Computer Science

### 3.2 Starting and Ending in Different Programmes

Students who have failed at least one of the old curriculum's core courses (i.e. CS20A or CS20Q) should take care in selecting their courses for 2005/2006. They should at least register for the new version of the course they failed (i.e. CS20S for CS20Q and CS20R for CS20A) but they should also pay attention to what other courses they will need in order to complete the major. Students who will need to take third year courses from the new curriculum should make sure that they will have the necessary pre-requisites by 2006/2007.

A student who has failed one or both of CS20A and CS20Q, should take the replacement(s) for the failed course(s) and also determine whether he needs to also take CS27Q and CS23Q based on the third year courses he plans to take. No special consideration will be given to students who do not have the appropriate pre-requisites for third year courses in the 2006/2007 academic year.