

# Choosing Modules from Department of Computer Science

## Some Tips for the Freshmen

### July 2004

**Q.** When should I choose a program?

**A.** This is the most important question that you should consider carefully during your first year. Firstly, you may want to choose B.Comp. (Honours) in Computational biology, and you should make this decision as soon as possible (the deadline for application is 30 July 2004 at 5pm. The application form is to be submitted to level 3, General Office at Block S16.)

Secondly, you should ask yourself whether you want to study a program which is more business and management related, or more technically related. This decision will affect the courses you will be taking; and it may also bar you from taking some other courses.<sup>1</sup> You have to make this decision by the end of the first year.

Note that if you have not been admitted to the B.Comp. (Honours) in Computer Engineering program, then you are not allowed to choose that program.

**Q.** What modules should I be taking?

- A.**
1. You should try to take the **Common Essential** modules, as these are courses that are required of all programs. To take a module, you should check whether you have satisfied the pre-requisite of the module. Please refer to the later note on “pre-requisite” for more detail.
  2. You should start eyeing at, and registering into, some of the GEM modules. Again, you will require them regardless of the program you will be choosing.
  3. You should plan to take a two-course series of programming modules: either **CS1101 & CS1102** or **CS1101S & CS1102S**.<sup>2</sup> You should try to take the first course of one of these series in the **first semester** of your freshman year. This will give you a real experience of what programming and computing is all about, and provide a yardstick for your choice of program in the near future. For detail of what programming series you should choose, please refer to the note on **First Programming Language**.
  4. You have to plan carefully about the choice of mathematics modules. If you intend to take one of the following programs:

B.Comp. (Honours) in Communication and Media  
B.Comp. (Honours) in Computer Science  
B.Comp. with technical focus (three year program)

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<sup>1</sup>For instance, the B.Comp. (Honours) in Computer Science program requires ST2131, and the B.Comp. (Honours) in Information Systems program requires ST2334. However, one can only take either ST2131 or ST2334, but not both. Once you have taken ST2334, you will not be able to satisfy the program requirement of the B.Comp. (Honours) in Computer Science. Please also refer to the item about “Preclusion” for related matter.

<sup>2</sup>Please note that the CS1101 and CS1102 must be taken in a series, and so is CS1101S and CS1102S. CS1102S is a recently approved module, and has not been listed in the curriculum handbook.

then you can begin by taking a MA1505 (about Calculus)<sup>3</sup> and CS1231 (on Discrete Mathematics). After that, you can choose to take ST2131 (on statistics), and you should **choose between the following two modules** to satisfy the Maths requirement:

- MA1506: This covers more in-depth of calculus and some element of linear algebra. It is a pre-requisite for a few courses offered by Engineering Faculty. However, in comparison with MA1101R, it does not have sufficient content as a pre-requisite for some of the modules offered by School of Computing.
- MA1101R: This is a course preferred by the Department of Computer Science, for its adequate and formal coverage of linear algebra. It is useful for some of the modules offered by the School of Computing (at level 3000 and above) and by the Department of Mathematics.

In summary, note that MA1505 and MA1506 will lead you to modules offered by Engineering Faculty, and MA1505 and MA1101R will allow you to fully explore the modules offered by the School of Computing and Department of Mathematics.

5. If you are planning to take B.Comp. with Business focus (three year program), then you should take note that ST2334 is a required module for this program. In addition, please be aware of the latest change in the pre-requisite for ST2334: it is no longer possible to use CS1231 as a pre-requisite for ST2334. Instead, you should take a course in Calculus. Please refer to the module description of ST2334 for detail. Note that you can take the Calculus course as an “Unrestricted Elective”.

**Q.** What should Polytechnic graduates be aware of about taking Maths modules?

- A.**
1. Polytechnic graduates follow programs offered during the Academic Year 2003/2004. As such, they are eligible to take MA1505C instead of MA1505. However, please note that:
    - MA1505C will be offered for the **last time**, in the first semester of AY2004/2005.
    - MA1505C combines well with MA1101R. However, it is not a good pre-requisite for MA1506. So, if one intends to take MA1506, one should take MA1505 instead of MA1505C.
  2. As Polytechnic graduates do not have equivalent knowledge of A-level mathematics, they may face difficulty in managing mathematics modules. The Department of Mathematics encourages Polytechnic graduates to take a bridging module, such as MA1301, to equip themselves with necessary knowledge in Calculus, before taking up MA1505 or MA1505C.

**Q.** What’s important about “Pre-requisite” and “Preclusion”?

**A.** **Pre-requisite** of a module spells out, in terms of module codes, the necessary background knowledge required for taking the module. You should take and pass those modules listed in the pre-requisite before you are allowed to take the module. Any waiver of pre-requisite will be judged by the Department on a case-by-case basis.

**Preclusion** lists a set of modules that are sufficiently overlapped with another module. If module A has module B in its preclusion list, then you will not be able to take module A if

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<sup>3</sup>For polytechnic graduate, please refer to next item for detail discussion about your study of mathematics.

you have taken module B. Note that in this case, module B is only overlapping in content with module A; module B is **not** considered a substitute for module A. It is important then, that you are aware of the list of precluded modules for the program you have chosen.

### **Beware**

*If you have mistakenly taken a module that precludes you from taking any required module in your program of study, then you will not be able to satisfy your program requirement.*

Some of the common mistakes made by students in managing pre-requisites are:

- χ Taking ST2334 while considering applying for four-year programs offered by the Department of Computer Science;
- χ Taking ST2131 while considering applying for four-year programs offered by the Department of Information Systems;
- χ Taking ST1232, which bars them from taking ST2334, which is required for the B.Comp three-year program with Business focus.
- χ Taking MA1102R, which bars the students from taking MA1505, a commonly required module in most of the programs offered by Department of Computer Science;<sup>4</sup>
- χ Taking MA1100, which bars the students from taking CS1231, a required module in most of the programs offered by Department of Computer Science.
- χ Taking CS2102, while considering applying for some of the four-year programs offered by the Department of Computer Science (you need to check if CS2102 or CS2102S is really required for the program).

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<sup>4</sup>Note that if you wish to take a double degree with the Department of Mathematics, then you are required to take MA1102R. In this case, you should not take MA1505, as the number of mathematics courses you will be taking towards the double degree will adequately cover the requirement for MA1505. However, this option is currently not available for students in the B.Comp (Honours) in Computer Engineering, since taking MA1505 and MA1506 is necessary for them to take modules offered by the Engineering Faculty.