Dear Profs,

I’m planning to take CS2020 instead of CG1103, because the workload (6 mc) and the pre-requisite (at least A- in Programming methodology) can somehow indicate that, CS2020:

1. This is an accelerated module, thus I can make full use of my time and fully-stretch myself
2. The topic covered would be boarder, and I wish to learn more in algorithms
3. The students’ ability would be relatively higher, thus the lecturer can go deep into the basics of Algorithms to better challenge the students, and hopefully I can get a better understanding on the basic concepts after these challenging tasks

I’ve check & compared the module description for both modules… It seems that, CS2020 contains nearly all the things covered by CG1103: (I just cut & paste all the things from the course Description)

CG1103-Orange || CS2020-Dark Blue

Object-oriented problem modeling with concepts of objects, classes and methods, object-oriented problem forrmulation and problem solving,

object-oriented problem modeling with concepts of objects, classes and methods, object-oriented problem formulation and problem solving

data structure implementation strategies, abstraction and encapsulation of data structures, object-oriented programming constructs, use of APIs and class libraries,   
data structure design principles and implementation strategies, abstraction and encapsulation of data structures, object-oriented programming constructs, use of APIs and class libraries

exception handling, lists, linked lists, stacks, queues, hash tables and their algorithmic design, various forms of sorting and searching methods, recursive algorithms, and Big-O notation.

exception handling, lists, linked lists, stacks, queues, hash tables, and their algorithmic design, various forms of sorting and searching methods, recursive algorithms, and algorithm analysis.

More things included in CS2020:

On data Structure: trees, graphs; Algorithm analysis (has included Big-O notation already)

object-oriented programming with application to data structures.

However, there’re some constraints:

1. CS2020 is using Java, while (probably) CG1103 is using C++. As for a CEG student, C++ would probably be more import since we’ll be doing embedded system using C++. But this would not be a problem since…
   1. According to my self-learning experience in C/ Action Script 3 /PHP, it’s very easy to learn a new programming language (like C++), and…
   2. Java is beautiful – I’ve read part of <Thinking in Java, 4th ed>, it’s a very good language for learning the principles of OOP. (and that is really a good book)
2. CG1103 is tied up with CG1413, thus… taking CS2020 probably means that… I cannot take CG1413. I’m a little bit worried about this point… However, there’re substitutes like ES2007S/IS2101 for me to satisfy the program requirement…
3. CS2020 is meant to be difficult (6mc + better students), but I can handle that because that… I think… I’m good at programming and math things. (though my year 1 Sem1 CAP is not so satisfactory) In addition, I think that… Comparing with CAP, the real ability is much more important.

Frankly speaking, I don’t really have any experience in both modules… The only information I’m based on is the course description of both modules, and the comparison between CG1101 and CS1101S (Which I wanted to take at first). Thus, please do point out if I got any misunderstanding on any modules.

One of the things I like most about NUS is its flexibility of the modules thus its students here can fully stretch their strength and really learn the things they want to learn. Going back to our CEG program, I’m thinking that the most important thing we want to do is to provide better computer engineers. I’m writing this email not formally making a request on taking the module CS2020, but to discuss if I can gain a better knowledge form CS2020 and thus become a better Computer Engineer(the answer is “Yes, I should take CS2020” From my perspective). Thus, it’s the best if I can gain some professional advice from you (since you know the course far more than me, while surely I know myself more).

Thanks for your time reading this & I should thank for your advice in advance,

and with best regards,

Song Yangyu (Matric No.: A0077863N)

23:15:33, 23/Dec/2010