Department of Computing and Software (CAS) FAQ Sheet

Q: What do I need to be accepted for SFWRENG/TRON?

A: A: GPA ≥ 4.0 makes you eligible, so your chances depend on how many other students want to enter SFWRENG/TRON. The main factor is your choice, but given the same choice, students with better grades are preferred. The Faculty of Engineering is trying very hard to accommodate the student requests as best as possible.

https://www.eng.mcmaster.ca/programs/engineering-i#Moving-to-Level-II

Admission to a B.Eng.Mgt. program requires the completion of ECON 1B03 with a minimum grade of 5.0; an interview may also be required. Students admitted to a B.Eng.Society program are required to submit a statement indicating the educational objectives for the focus electives. Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs**.**

This year we have room for 130 students in SFWRENG and 85 students in TRON. Last year we had 100 seats in SFWRENG AND 80 in TRON. In 2017 the cut off was 9.1 for TRON AND 8.1 for SFWRENG.

Q: Does it affect my chances if I listed SFWRENG/TRON as my second (third) choice.

A: Of course, preference is given to the students who listed SFWRENG/TRON as their first choice. There is a precise formula used as assigning the specializations to students is a complicated process with many factors being taken into account, though the choice and grades are the major ones. The Faculty of Engineering is trying very hard to accommodate the student requests as best as possible.

Q: How does SFWRENG differ from TRON?

A: Three major differences: different study plan (you take different courses) -- so the body of knowledge and the skill set the students acquire are different. Very briefly and hence imprecisely: TRON has less emphasis on math and software and has a significant hardware component. SFWRENG has more math, design, and software, and little hardware. Moreover, TRON students take several courses outside of CAS, while SFWRENG students do not.

Q: How does Computer Engineering differ from SFWRENG or TRON?

A: Computer Engineering is concerned with the hardware and it is studied at the ECE department. SFWRENG is concerned with design and development of safe and maintainable large software systems and is studied at the CAS department. The course of study is entirely different and the job opportunities are also completely different.

TRON is concerned with design and implementation of mechanical/electronic components controlled by software and is studied at the CAS department -- the software part, though many courses are taken outside (mechanical engineering, hardware at ECE). The course of study is entirely different and the job opportunities, though different, may overlap to some degree.

Q: How does SFWRENG / TRON differ from COMPSCI?

A: On the level of study program, SFWRENG is an engineering program with a very few or no electives and with a load approaching 40 units a term, while COMPSCI is a science program with more electives and with a load of 30 units a term. Though there are many similarities, a good analogy is the difference between chemical engineering and chemistry. Both need to study the basic science, but the emphasis and goals are different. So, a lot of computer science must be known by the SFWRENG students. But the emphasis is on designing and maintaining safe large software systems, hence the SFWRENG students learn more about specification, about designing and validating of such systems in comparison to COMPSCI students.

Q: How complicated it is to switch from one engineering specialization to another?

A: It is very complicated and it will be supported by the Associate Dean's office only if there is a serious reason for the switch. Such students may end up in one level below due to differences in courses and need to catch up, but the details depend on the individual circumstances. So, it is not a good strategy to go into a program A thinking *if I do not like A, or if I do not do well in A, I will switch to B*.

Q: Can I enrol in SFWRENG-Embedded Systems/SFWRENG-Game design?

A: No. Both programs are being phased out. For Sfwr Eng-Embedded Systems the last batch of students admitted was September 2017.

Q: What are the job prospects for graduants of SFWRENG/TRON lately?

A: The jobs prospects currently are very good, especially for co-op students who often end up getting job offer from the place of their co-op.

Q: How does the co-op option work?

Please refer to: https://www.eng.mcmaster.ca/co-op-career/co-op-program

Q: I did not do too well in ENG 1D04, should I pursue SFWRENG/TRON?

A: It is hard to say as there are various reasons for not doing well in 1D04. Some of them would have no bearing on how well you could do in SFWRENG/TRON, and some would. Some aptitude for programming is necessary for a satisfactory completion of SFWRENG/TRON. But neither program has as its goal to make you into a computer programmer. However, if you find programming in 1D04 uninteresting or drudgery or did not really understand what it was about, you might not enjoy studying SFWRENG/TRON as the design of software is fundamental to both programs.

Q: How complicated it is to switch from SFWRENG/TRON to COMPSCI?

A: The switch is very complicated as COMPSCI is a direct entry program and Engineering 1 does not provide sufficient courses for a student to enter Level II in COMPSCI so the student would have to go to Level I COMP SCI, i.e. re-admitted. Several previous switches did not work too well, so the Associate Dean's office would consider it only for very pertinent reasons. Similarly as for switching between engineering programs, such a student would probably require an extra year of study. If you seriously consider switching to COMPSCI for Level II, please see the COMPSCI undergraduate advisor as soon as possible.