Mech Eng 3D Printer Use Policy

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3D printers are an important new tool for modern engineering design. Whether for prototyping parts/mechanisms, or for creating fully functional parts, 3D printers can be used in combination with traditional methods to produce advanced engineering designs. The Mech Eng Dept. has made several 3D printers available to students wishing to use this tool as part of their coursework.

In order to provide a fair experience to all undergraduate and graduate engineering students, a set of rules have been developed for using the printers with the following objectives:

(a) Ensuring the longevity of the 3D printers by proper/allowed use, (b) Fair access to all engineering students wishing to use the 3D printers, (c) Accountability (both responsible use and accounting for material usage), (d) Training of students for best practice/procedure when using the machines.

Rules:

1) A training session/tutorial is required for any student wishing to use the printers. Such a session is incorporated into the MECH 350 and 400 course. As well, the "3D Printing with Ultimaker User Guide" should be followed closely while using the printer. The user should also seek help of the **PA** (Printer Administrator**)** in **ELW B103**.

2) Only CURA software should be used for creating g-code files to program the machine. CURA is available for download here: https://ultimaker.com/en/products/software

3) Only selected 2.85mm PLA (polylactic acid) print filament is permitted for use on the 3D printers. The filament is purchased by the Mech Department from a proven manufacturer, and its use ensures little or no nozzle clogging. No other materials, or PLA from other suppliers is permitted on the printers. This rule balances objectives (a) and (b) above.

4) Prior to using the printers, the *3D Printer Access Form* must be completed and submitted to the PA.

5) Upon approval, an access-key will be provided to unlock the machine and program it from the user's SD memory stick. While the key is in the user's possession, he/she agrees to follow the policies outlined here.
    a. Use the machine for the specified time as estimated by the CURA software.
    b. Monitor the amount of filament used. The user needs to monitor the value of the filament ($1 per 10 grams).
    c. If unsure about proper use of the machine, encountering problems, or poor printing, the user should halt the print and seek help from the PA.
    d. When the machine finished printing, the printer should be tidied up, and the key returned the PA.
    e. Any printer problems/malfunctions should be immediately reported to the PA.

6) Providing the printers are not being used for coursework, they can be used by researchers and student groups. Access will depend on availability, and will be determined by the PA. A UVic FAST account number must be supplied on the Printer Access Form to cover the cost of the filament. Charge will not apply if a misprint is caused by machine error.