

# Digital & Embedded Systems

## ENSC3020 / ELEC4403

<b>Practical Lab P1 – PCB Design</b>	<b>Pass/Fail</b>
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### **(A) Safety Induction by Member of UWA Workshop**

- General hand tools / power tools
- Power drill
- Dremel
- Hot air gun
- Saw
- Blade knives

### **(B) Design a PCB in Fritzing**

Implement the schematics shown overleaf.

Use Fritzing on your laptop PC and transcribe the schematics.

Then switch to PCB mode, align all components (especially LEDs) and optimize the track routing.

### **(C) Design a 3D Object in TinkerCAD (*optional*)**

If you have time left, login to TinkerCAD and go through all steps of the tutorial. Design a dice with your initials for the missing numbers or design.

<b>Practical Lab P2 – Soldering</b>	<b>Pass/Fail</b>
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### **(A) Safety Induction by Member of UWA Workshop**

- Soldering safety
- Soldering techniques

### **(B) Soldering**

Solder all components onto the given PCB, then insert the battery and test the functionality of your circuit.

### **(C) 3D Printing (*optional*)**

If you have time left, export your dice design (or a case for the electronic dice) to a 3D-printing file and print it on a 3D printer.

