

Coding and Mechatronics—Sessions 2 Outline

U3A Bendigo Short Course
Ray Tampion and Michael Gallagher
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Design, construction, operation and coding of mechatronic devices

An introduction to the design, construction and coding of digitally controlled devices focussing on avenues via which U3A members could engage in such activity.

Ray Tampion

- About Arduino
- Demonstration of how an Arduino board was programmed to automate aerial switching
- Explanation of how the printed circuit board that interfaces the Arduino to the aerial array via relays and driver ICs was designed and made
- Display of objects he had created with a 3-D printer
- Demonstration of setting up a 3-D printer

Michael Gallagher

- An introduction to electronics: water in pipes, electrons in circuits, some similarities
- Demonstration of programming the movement of a stepper motor connected to an Arduino Uno microcontroller board via the Arduino IDE
- Demonstration of the programming of a pan-and-tilt camera mechanism connected to a Raspberry Pi microcomputer via the Python programming language.
- Demonstration of some of the power of the Python programming language

Find images on the U3A Bendigo Facebook Page

- <https://www.facebook.com/U3A-Bendigo-1905346963088900/>