



Engineered Systems CAD file.

### 2019 Course details.

## Engineered Systems

### In this program....

2 Hands on engineered systems projects for Technology Mandatory Stage 4 or Engineering / iSTEM for stage 5.

Start with a simple aircraft suitable for a range of classes and open to scientific method and innovative design opportunities.

Develop a wind powered mechanism prototype.

Teaching programs in NESAs program builder format included.



## Who We Are

Ruth and Peter Thompson are known as the most experienced Technology Educators in the country. With international study tours, speaking engagements, ministerial advisors, curriculum developers, HSC examiners and assessor and a long-established reputation in STEM / STEAM education, they are now sharing their knowledge with teachers, schools and systems.

Ruth and Peter are trained Industrial Arts teachers who embraced design education as part of their pedagogy, they both have used coding (computer programming) as a tool since the 1980's. They are experienced engineering educators with different passions.

Ruth has expertise in Textiles, Timber, being a STURT School for Wood Fine Furniture graduate. A passion for innovative design. Ruth was also responsible for placing the first 3D printer into a school in the world 2006.

Peter has a career long interest in computing, design, design thinking, CAD and CAM, control technology and now the IoT and M2M technologies. Combined with the experience as the Technology Education Inspector at BOSTES (now NESAs) he has interests in Technology and Engineering curriculum's international history. Peter is an internationally published author in high school engineering education, a former Coordinating Supervisor of HSC marking and consultant.

### Contact Us

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### Courses in:

- ✓ eTextiles
- ✓ SCRATCH intro to coding
- ✓ Fusion 360 / Creo CAD
- ✓ Engineered Systems projects
- ✓ Digital Control Technology

[www.dontpanic.net.au](http://www.dontpanic.net.au)

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STEM**

*Course details 2019*

## Fusion 360 intensive

### In this program....

2 days going from start to expert. Learn about the primary workspaces in Fusion 360 by Autodesk, free for schools including a wealth of resources.

Learn how to 3D print and exporting to use with laser cutter, you will find Fusion provides opportunity for a large range of projects from Modelling, assembly to animation.

Leave with enough skills and knowledge to teach and manage a class.

## SCRATCH

### In this program....

Learn how SCRATCH provides a great entry point for teachers and students. SCRATCH can meet the requirements of many syllabus outcomes in a fun way. SCRATCH 3 is now released and provides interactivity with physical devices. It also runs on any platform. Go from SCRATCH (Block style programming) to a GPL, (generally text-based languages) easily. Students can create technology solutions with SCRATCH, games, interfaces, animations, storytelling, connect to hardware and the Internet of Things.

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*“They are great. Don't hesitate. Practical, hands on and relevant courses.”*

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## Digital Control Technology

### In this program....

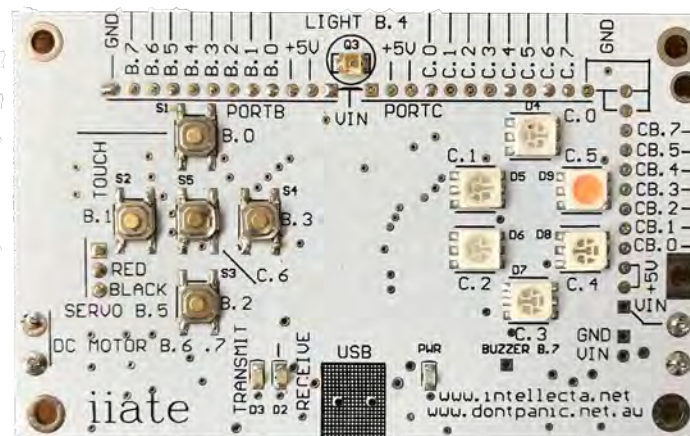
Start from basics with the justification for a Digital Technologies curriculum. Learn to write and simulate simple programs in Blocks and Text, a straightforward approach for students and teachers. Apply this knowledge to 2 projects by using a Microprocessor board with built in Inputs and Outputs. Learn to control LEDs Servos and Motors and make them react to a range of sensors and inputs.

Leave with 11 boards and enough equipment to teach a class.

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*“Great fun and very informative!  
I'm inspired. Thanks Ruth and Peter. 5 stars”*

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*eTextiles project from a course*

## eTextiles

### In this program....

Learn how eTextiles integrates the S, M and T in an Engineered project that uses Mathematics and Science to make it happen.

Cover Basic electronics and create a circuit, learn to test, problem solve and debug. Apply simple mathematics to a design process using idea and concept development appropriate for Stage 4.

Take home 2 projects and enough bits and pieces to keep practicing your eTextiles expertise. You only need to be able to sew on a button. Digital manufacture and datatypes are also covered.

Once these concepts are understood, you will see they can be applied to ANY project and any material. Adding an LED to a storage container, lighting up laser engraved acrylic, coding the processor to do other things are all explained.