



Conference Session Outline



Thursday 22nd June 2017

Session 1.1

QCAA - New Syllabuses Engineering & Aerospace (Max 50)

Will be advised

Session 1.2

Design Industry - How it affects teachers/ Teaching (Max 30)

Understand the importance of your role as a teacher and what it means to the industry and its progression while learning about the tools to facilitate high quality teaching.

Session 1.3

Introduction to Arduino Coding (Max 30)

This workshop will provide participants with an introduction to coding using Arduino microcontrollers. Notably discussing where coding sits in the curriculum and how QUT is supporting students and teachers through a range of on campus STEM Engagement programs.

Participants need to bring their own laptops with Arduino software installed.

<https://www.arduino.cc/en/Main/software>

Session 1.4

OnGuardACEPro and your hand held device (Max 20)

On-Guard Safety Training – OnGuard ACEProPLUS (LMS) presents a series of self-directed, online, eLearning safety training curriculum packs for schools.

Note: Participants need to bring their own device.

Session 1.5

Formula High School - Practical build LeMans Prototype (Max 20)

Will be advised

Session 1.6

Gilking - 3D Printing (Max 6)

Introduction to 3D Printing

- Scenario
- Introduction to the printer and its features
- Printer Operation
- Printer Control
- Print Demonstration
- Slicer

Session 1.7 (Max 20)

Drones in education

Will be advised

Session 1.8 (double session)

Robot Hack with Questacon (Max 30)

Starting with simple inputs and outputs, create robots that can help with household chores.

We'll combine technology and simple materials in an activity that promises to engage students of all ability levels.

Explore how you can integrate similar inquiry learning activities in your classroom.

Starting with simple inputs and outputs, create robots that can help with household chores.

Session 1.9 (double session)

Generate Vector Lines from an Image to use for 3D Printed, CNC and Laser Cut Projects with Adobe Illustrator (Max 15)

Will be advised

Session 1.10 (double session) (Max 20)

DesignAbility - STEM projects on the Power Anchor

The PowerAnchor is an exceptionally useful platform for car and plane projects. This hands on presentation will showcase 5 projects and demonstrating how to make and test the vehicles as well as explaining outcomes.

Session 1.11 (double session)

Edubotics Scratch Arduino (Max 20)

Scratch-Arduino Robotics and Coding

Session 1.12 (double session)

KitStop - Build your own Boom Box (Max 12)

This course is aimed at introducing Soldering and Electronics assembly skills.

Participants will learn about tools, safety considerations as well as practice soldering skills under experienced guidance.

This course will then take participants through the electronics assembly processes to manufacture the internal electronics of the popular Kitstop Boom Box project. Participants will take home their working Stereo Amplifier with speakers.

The course will touch on common problems, how to avoid them, as well as some basic considerations when designing and building the case for the electronics.

Prior electronics assembly experience is NOT a prerequisite.

Participants need to bring 6 AA batteries.

Session 1.13 (double session) (Max 15)

Hands-on metalworking sessions using the genuine British Metalcraft range of tools.

Genuine Metalcraft TM tools enable almost unlimited design & manufacturing possibilities for students of most ages and adults.

Get hands-on instruction on the use of these tools & get to make a finished metals/wrought iron project to take home as a teaching model.

Work is hand powered and needs no heating of the metal making things safer, faster and easier to repeat than older methods.

The resulting ironwork is easily combined with other materials like timber leading to some great project results.

Chevington Tools also supply a wide range of hard to source accessories -details available on the day.

Session 2.1

QCAA New Syllabus Design (Max 50)

Will be advised

Session 2.2 (30)

Trotec Laser - The benefits of Lasers in Education and how your school can benefit.

Working through the details of having a laser in school, what can be achieved. The ways to put together a successful application for the educational outcomes

Session 2.3

STEAM Education "QUT The CUBE" Middle School Projects (Max 30)

Will be advised

Participants need to bring their own laptops.

Session 2.4

Design Graphics (Max 20)

Will be advised

Session 2.5

Formula School - Paper work / software and how it relates to VET or SAS (Max 20)

Will be advised

Session 2.6

Gilking - 3D Printing (Max 6)

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Session 3.9 (double session)

Use Breadboard based electronics to teach Coding with Alpha Code, Assembly, and C (Max 15)

Will be advised

Session 3.10 (double session)

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Session 4.1

QCAA New Syllabus – Design (Max 50)

Will be advised

Session 4.2

Macrosphere - MakerBot in the 3D classroom. (Max 30)

Educators have a responsibility to train on the equipment that will be relevant when our children enter the workforce but it is not always easy to roll these technologies in to the curriculum. MakerBot 3D Printers are unashamedly focused on education and have many tools designed to help you get the best out of your 3D classroom.

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Participants need to bring their own laptops.

Session 4.4

4x4inSchools in the curriculum - including the Wombat Warriors 2016 World Champions (Max 20)

A session where we unpack the journey our school has been on embedding the 4x4 program into our schools curriculum. From the start right through to our schools successes on a world stage to become world champions. Our goal is to unpack this from a teachers perspective as well as our students presenting theirs. 4x4inSchools is a classic STEM project, where teams of students design, make and test an RC 1:18 scale model 4x4. The students will have a couple of their vehicles there for you to see and have a go at driving.

Bring: Camera for taking some photos and any questions you might have - we will try to ensure some good question time at the end.

Session 4.5

Formula School - Paper work / software and how it relates to VET or SAS (Max 20)

Will be advised

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Friday 23rd June 2017

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Session 1.9 (double session)

Designing and making a Desk Lamp Project with Electronics, 3D Modelling and a Laser Cutter (Max 15)

Will be advised

Session 1.10 (double session)

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Bring: Camera for taking some photos and any questions you might have - we will try to ensure some good question time at the end.

Session 2.2 (Max 30)

National Curriculum made easy

Will be advised

Session 2.3

Trotec Laser - The benefits of Lasers in Education and how your school can benefit. (Max 30)

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Session 3.1

Preparing for Design (Max 50)

Will be advised

Session 3.2

Gateway Schools to the Manufacturing and Engineering industries. (Open numbers)

The Gateway to Industry program provides an ecosystem to change delivering Industry Partnerships and connections to teachers and schools through an effective framework.