

# Australian UAS Academy



By Franck Martin, Chief Executive Officer

### Teach-Learn-Apply Training in Unmanned Systems Technology

The Australian Unmanned Systems (AUS) Academy was established November 2009 to support the professional growth of Australia's burgeoning civil unmanned aircraft systems industry. The Academy is a collaboration between Brisbane based company, V-TOL Aerospace and the University of Queensland. Both organisations bring together a wealth of skill and knowledge into the training and education experience. The Academy will offer three streams of UAS training products:

- Technical training in avionics, software, structures, payloads, complex systems in conjunction with the University of Queensland.
- UAS Pilot training - pilot and crew resource management.
- UAS Applications - Professional development, enterprise and industry workshops designed to educate end-users in the use of unmanned technologies in a spatial environment.

The university is the postgraduate and professional development education partner for the academy. The Academy, based at Woodlands of Marburg, near Ipswich, in Queensland, has exclusive access to a 40 square km flight training area designated to small UAS under 10kg. Here students are able to put in practice the theory taught through online education, in the classroom and for practical operations, in the field. In addition to the three core UAS training products discussed earlier, the Academy plans to deliver risk management and safety courses designed to meet the needs of the aviation regulatory and insurance sectors.

### The Academy's Vision

A goal of the academy is to set the benchmark standard for Unmanned Systems training. This will be achieved through developing strategic partnerships that will enhance the learning experience for both our clients and students. Through our relationships with industry leaders the AUS Academy is now well positioned to develop and enhance education and training in the Unmanned Systems Technology field. The vision for the AUS Academy includes:

- Providing a strong contribution to the sustainable development of the UAS industry;
- High level contribution to the development and application of proactive skills strategies, career pathways, and education to meet the needs of a hi-tech emerging industry;
- Excellence in postgraduate training to meet the needs of organisations, the UAS industry and the discipline;
- Engaging with schools and youth organisations to bridge the gap and provide career paths into University; and
- Engagement in knowledge transfer and enterprise solutions with our aviation training community.

### Future Skies™ - Enhanced Interactive Web-Based Learning for the UAS Community

The AUS Academy through its Future Skies™ strategy offers schools and youth organisations the opportunity to participate in a structured and planned aerospace program with access to the online UAS community. This approach will provide the platform required to develop industry professionals and connect individuals to a shared learning and networking environment. Success is achieved through a mixture of web-based learning and outreach activities. The Academy web-based interface will allow access to multiple school sites, via a licence fee, enabling teachers and students to work in-real time and or download course modules and content for self pace distant education learning.

The program acknowledges the full and busy nature of the school curriculum, and offers teachers the opportunity to enhance the set curriculum by providing real world examples of maths, science, and physics, and other UAS theoretical subjects.

A major objective of Future Skies™ is to attract and prepare young people to pursue further tertiary studies in engineering, electronics, and science at University. The program capitalises on bringing these themes into the school learning environment, and provides professional development opportunities for teachers, as well as curricular and other resource material for the classroom.

### Capability and Professional Development

A core role of the AUS Academy is to develop an understanding of commercial unmanned systems as they apply to organisations and professionals. Academy workshops and courses are designed and packaged to enable rapid knowledge uptake and the ability to "white paper" solutions. These packages are delivered in collaboration with the University of Queensland and focus on:

- Technology Capability and Development
- Applications and Limitations
- Regulatory and Risk Issues
- Unmanned Systems Strategies
- Human factors and CRM
- Systems and Network Management
- Individual Development
- Organisational Outcomes

### Broader Industry Activities

It is becoming clear that unmanned systems are an emerging technology that can offer commercial and operational advantage to organisations. In the case of small UAS, many are predicting this class of UAS will become the first to achieve routine operations in a national airspace system. Australia is taking a leading role in creating industry benchmarks towards this vision and is in a unique position to maximise this comparative advantage. The Academy is here to assist in facilitating this outcome.

There presently does not exist a suitable organisation or single entity in Australia to act as a conduit between UAS operators, regulator, insurance underwriters, researchers and universities on matters relating to small UAS policy development, technical certification, training standards, maintenance training and the delivery of small UAS pilot courses. The AUS Academy is ideally positioned to undertake this role in Australia and contribute to the emerging global UAS community.

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