

Academy Racing

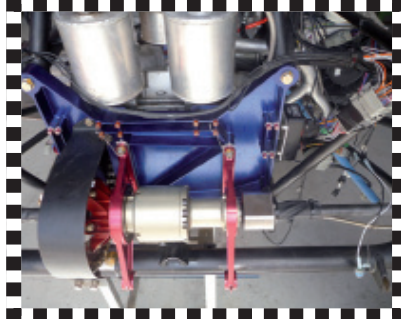
IN PURSUIT OF EXCELLENCE

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The Australian Defence Force Academy racing team, Academy Racing, is a university-based project for midshipmen, officer cadets and other students at UNSW@ADFA in Canberra. Just one of many interesting voluntary extra-curricular activities available at ADFA, allowing future ADF officers to participate in a competition known generally and world-wide as Formula SAE.



Group Captain Loch Mitchell, acting commandant, at the wheel



Academy Racing is comprised primarily of future officers of the Australian Defence Force and, as such, the team provides an interesting and rewarding training opportunity for members. Just like ADFA, the team promotes leadership and academic excellence. It also engages students from many degree streams through a wide variety of roles required to keep a team running.

Academy Racing intends to provide the best representation of ADFA, UNSW and its sponsors by applying a professional approach throughout the Formula Society of Automotive Engineers (Formula SAE) Competition, from initial project research and design through construction and testing to competing. In 2011, this representation went international when the team competed in Formula Student UK.

ADFA offers its students the chance to study the degree of their choice through the UNSW, alongside military training, to become officers in the ADF. After initial training, where trainees learn the basics of military life, including drill, weapon handling and military law, they commence university studies.

In addition to academic classes, students attend academy military education and training (AMET) to further their military skills, leadership skills, personal fitness and general knowledge, all aimed at producing high-quality officers to lead the next generation of soldiers, sailors and airmen.

Throughout the year, midshipmen (Navy trainees) and officer cadets (Army and RAAF trainees) break up and go on single-service training (SST) at their respective officer-training schools. This is an opportunity to experience life within a cadet's chosen service and gives them a chance to put the leadership skills they are learning during AMET into practice. For example, Army cadets are able to go out field and experience practical training including tactics, weapons training and field skills.

This enhances the overall experience at ADFA as it combines academic studies with a fast-paced military-training schedule.

Midshipmen and officer cadets also have many opportunities to put the leadership skills they learn during business hours to use in their personal time, with ADFA offering many voluntary extra-curricular activities (VECA) including sports, community service and, of course, other projects such as the Academy Racing Team.

Skills such as organisation, teamwork and professionalism come into play when participating in a VECA. All team members, regardless of their degree, service or year level, need to be able to work together in a professional environment in order to achieve the team's goals.

Academy Racing provides many practical benefits for its members. The engineering students are able to put what they are learning in class into real-life practice – an



WS11

Academy Racing currently runs its own-design WS11 race car, the seventh car designed and built by the ADFA-based team. WS11 is an open-wheel, rear-wheel-drive autocross racecar with semi-stressed engine, space-frame chassis, naturally aspirated in-line four-cylinder Suzuki engine and beam-axle suspension on 10-inch custom-made aluminium wheels.

In designing the car, the team took many successful aspects of its WS10 car and improved on a good concept. WS10 was designed using a top-down, systems-engineering philosophy striving for superior dynamic performance in a vehicle with reliability, simplicity, maintainability, ease of manufacture and safety high on the priority list.

opportunity that is often rare in a university environment. These students design and construct a car completely from scratch, and this sort of hands-on learning gives them something to work for and something physical to show for their efforts.

In addition, there's the opportunity for final-year students to conduct their thesis research on aspects of the project they have been working with for a few years. This experience is invaluable and a fantastic way to further their studies.

However, it's not only engineers who make up the team. There are also business, arts and science students who all get different but highly valuable experiences from Academy Racing.

Business-degree students use their skills to liaise with businesses and organisations in an attempt to gain sponsorship and maintain existing sponsor relationships and to promote other external organisational activities. This is something that is not offered as a part of a degree course, but is invaluable real-world experience for the students, which will undoubtedly become useful later in their military careers. For example, a cadet training to become a logistics officer will need to deal with external organisations for most of his or her career, so being exposed early to how business is conducted will be extremely helpful when they leave ADFA.

Science students assist with the technical side of the racecar, such as data collection and analysis, and creating and maintaining the team's website.

So, it doesn't matter which degree a student is doing, they all have skills and knowledge to offer the team and, in turn, receive a unique chance to work with and get to know other students across all years, services and degree streams, networking with a greater cross-section of peers who may potentially be helpful later on in their careers.

