

A LESSON IN DIVERSITY

In an increasingly competitive world, savvy businesses are embracing diversity in their workforce in order to choose from the largest and most diverse set of talented candidates. For Professor Fadi Aloul, recipient of the 2015 Airbus Group and Global Engineering Deans Council (GEDC) Award for Diversity in Engineering Education, it starts with getting future engineers to learn first-hand that diversity is more than its own reward.



AUS enjoys a steady and growing influx of young females interested in engineering studies

It's a discussion that Professor Fadi Aloul from the American University of Sharjah (AUS) knows all too well: incoming freshmen in his introductory engineering and computing course have just received their first group assignments, and now some students have shown up at his office to complain about why they have to work with this girl, this boy or that nationality. "This is a team," he replies, equally definitive and supportive in the same breath. "You're stuck with it, and you'll appreciate it by the end of the semester."

Some of the 500-plus students attending the largest course at AUS might not believe him at first. But as they divide their time between soft-skills training, an introduction to the field of engineering and a group competition, they start to experience first-hand how a team based on diversity can work together. "Professor Aloul told us that teams always go through a storming phase," recalls electrical engineering sophomore Nader Gawish, referring to the process of forming, storming, norming and performing. Although this can be intense for any group, "it helped us think of others, to make sure we understand each other," Gawish explains. "Once we got beyond initial clashes, we actually started to work together, got results and eventually became friends."

For the Egyptian-born Gawish, this experience proved so rewarding that he continues to volunteer for the course's final competition, where to date some 10,000 students from 92 nationalities have taken part in engineering challenges using everyday materials. Celebrated throughout the university, previous competitions have included building racing cars powered by balloons or building helicopters to fly more than nine seconds—all using basic materials like cardboard, wooden sticks, CDs or glue. Aloul and his team spend weeks devising practical but accessible challenges, an effort which has paid off since the programme has begun to garner more international attention.

Having completed his MS and PhD at the University of Michigan—Ann Arbor, Aloul is no stranger to international collaboration: in addition to his professorship role, he also heads the Hewlett Packard Institute at AUS, the only IT certification of its kind in the Middle East, giving him a unique

view on the symbiosis between academia and industry. "We are academics," he explains, "but we always like to hear from the industry what their needs are. The best thing we can do is to ensure that the students have the skill sets they need to be a productive asset when they enter the workforce." His philosophy fully resonates with Charles Champion, head of Engineering at Airbus and patron of the diversity award: "At Airbus Group, we are committed to continuously building a diverse and inclusive workforce and to encouraging all forms of diversity—as so well illustrated by Professor Aloul and his work."

Often underrepresented in engineering, women have become a focus of inclusion in AUS's introductory engineering course, which now boasts 35 percent female student involvement. Senior mechanical engineering student Catrine ElSayegh has been able to watch this development from the inside. "When I began, it was a bit difficult to get integrated into such a male-orientated major," remembers the Palestinian native. "But the more diversity there is in the group, the better the results; it's more productive—and more creative, of course."

Although the success of the programme is known locally, its impact did not begin to receive international attention until the diversity award. "When you have recognition coming from the GEDC and Airbus, this is also another big boost, and others find it easier to trust you," says Aloul. "This reward has given us credibility, and we're proud of that."

With this boost in international credibility, Aloul is exploring ways to build upon the success of diversity in the course. He has already begun to formulate a training programme

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Professor Fadi Aloul

for professors and universities to improve their approach to diversity on an institutional level. "Many companies today are facing a situation where their workforce is composed of employees coming solely from a specific gender or background," he says. "Where do you begin?"

For Aloul, it all starts with upper management: "If the top management doesn't endorse diversity, it will take a while before the company ever reaps the benefits of a diverse workplace." As students like his continue to enter the workforce, however, some executive boards may indeed find themselves heading back to school for a refresher course on diversity.

Will Cade



Airbus' Charles Champion congratulates Professor Fadi Aloul at the 2015 GEDC Award ceremony