

SPECIAL REPORT

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A teacher who wants students to believe sky isn't the limit

DR JARRAR INSPIRES HIS WARDS TO AIM FOR SPACE WITH TINY SATELLITES

POSITIVE CHANGE

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Peace is much

more than the

absence of wars

DUBAI

BY ANJANA KUMAR Senior Reporter

teacher is not just one who imparts knowledge. teacher is also one who inspires, motivates, sets a goal and provides opportunities for students to excel and make a positive impact on their lives and on the lives of others in the years ahead. Dr Firas Jarrar, assistant professor and manager, Yahsat Space Lab (YSL), at Khalifa University is all of that and much more.

Honouring his work and his commitment towards bringing about a positive change in the lives of his students, the UAE Pavilion at Expo 2020 Dubai has included him as one of the 'dreamers'.

Dr Jarrar is leading a team to inspire students to develop a love for engineering, using satellite research. For this purpose, he has put together a programme at Khalifa University's Yahsat Space Lab (YSL) for students.

The MSc Space Systems and Technology programme at YSL brings together graduate students from all areas of engineering, including electrical, mechanical and aerospace. As a team of 20 or so, the students Improv Dr Jarrar oversees a class comprising graduates from all areas of engineering, including electrical, mechanical and aerospace.

design, assemble, programme and test small satellites called CubeSats for launch into space. Once the satellite is in space. the team communicates with it and processes the data. "Unlike conventional satellites, which can be as big as a bus, Cube-Sats measure a mere 10x10x10 centimetres and weighs no more than 1.3kg. The downsized technology makes them less expensive to develop and launch - ideal for students' laboratory work.

Practical projects

There have been four Cube-Sat missions, one of which was responsible for acquiring tangible information about the atmospheric concentration of greenhouse gases above the UAE by processing data from the Argus 2000 spectrometer,"

UAE schools urged to apply for new \$250,000 'World's Best School Prizes'

Dr Jarrar said. The programme designed for graduates helps students build satellites over a period of two years.

"This is the reason why our project has been picked for demonstration at Expo 2020 Dubai. We work closely with students, supervise their activities - starting right from the conceptual design of the satellite. The students get to design, build and test the satellites they construct. It is a massive project and a massive opportunity for students. What is more, students also get to operate a satellite when it reaches

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its orbit. So, a big part of what I'm doing and what the programme is all about is of course academic, where the students get to learn about systems engineering and how to design a complete package of practical applications," Dr Farrar explained.

Personal inspiration

Dr Jarrar, who was born and raised in Amman, Jordan, said he was inspired by Carl Edward Sagan, the American astronomer, planetary scientist, cosmologist and astrophysicist all rolled into one whose spirit of scientific enquiry exceeded all these areas. "Taking inspiration is always great as it pushes you to dream. It sets a goal and makes you go towards achieving it," he added.