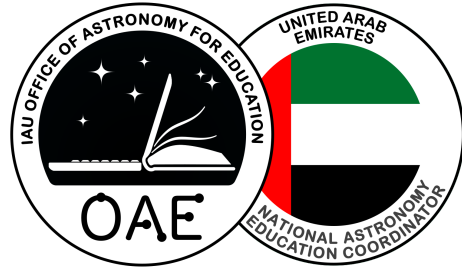


Astronomy Education in the United Arab Emirates



This overview is part of the project "Astronomy Education Worldwide" of the International Astronomical Union's Office of Astronomy for Education.

More information: <https://astro4edu.org/worldwide>

Structure of education: Children begin their comprehensive school at the age of 6. All students attend pre-primary school at the age of 4 or 5. The first circle of the comprehensive schooling lasts 5 years, comprising grades 1-5 (first cycle hereafter). At the age of 11, the pupils start the second cycle of comprehensive schooling that they attend for four years, comprising grades 5-8 (second cycle hereafter). The third cycle comprises grades 9-12. The first nine grades are obligatory grades that pupils must attend. Most of the pupils move to the course-based upper secondary school (high school), whereas a small ratio of the pupils continue on a vocational track.

In addition, there are private schools with other educational systems like the American system, British system, Australian system, Indian system, etc. All schools offer education in Islamic religion but pupils have the right to have the teaching of their own religion or to choose to attend ethics classes instead.

Education facilities: UAE school classes (either public or private schools) have average sizes of about 20 pupils. The schools are mostly well-equipped modern buildings. In most of the schools, students have easy access to laptops, smartboards, and other modern teaching equipment, and they have used these facilities in everyday teaching. Electronic platforms are being increasingly utilized in teaching. Even some final high school exams have been shifted to electronic platforms.

Governance and organisation: Schools are run under the control of the Ministry of Education and Emirates Schools Establishment. There are also local education councils in some Emirates like Sharjah Education Council, which ensures implementation of Ministry of Education policies. The national curriculum is set by the Ministry of Education, while the international curriculum is set by the country of origin.

Teacher Training: School teachers at UAE have at least a Bachelor or M.Sc. degree in addition to the professional diploma in education. The Ministry of Education selected highly qualified teachers from different nationalities, this makes the UAE education system internationally recognized. The school teachers learn about astronomy in the context of their physics and chemistry education. The universities offer and recommend general courses in astronomy for the teachers, and these courses are indeed popular. The universities further offer special courses for senior teachers in order to complete their training in science. Teachers are encouraged to take part in further training in science, especially astronomical camps and workshops in space sciences.

Astronomy in the curriculum: The UAE school curriculum does not include any specialized courses in astronomy. In cycles 1 (grades 1-5) and 2 (grades 6-8) astronomy is part of science studies. Whereas it is being offered only in Grade 9 in the cycle 3. The theme can include all the topics in astronomy from the Sun, Moon, planets, asteroids, and comets to black holes, Milky Way and other galaxies, and cosmology. This table gives the topics in more details:

Grade	Curriculum	Topic
Second	Integrated sciences	Earth and space sciences
Third	Integrated sciences	Earth and space sciences
Fourth	Integrated sciences	Earth and space sciences
Fifth	Integrated sciences	Earth and space sciences
Sixth	Integrated sciences	Our planet Earth, the Earth in space
Seventh	Integrated sciences	Space exploration
Eighth	Integrated sciences	Evidence for the Earth's past
Ninth	Integrated sciences	Stars

Astronomy education outside the classroom: There are a significant number of science or astronomy outreach centers in the UAE and they are located throughout the country. The largest of these centers is Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST), which is a part of the University of Sharjah, located in the Emirate of Sharjah. There are also several amateur associations. Planetariums have been playing a role in astronomy education since 1981 when the first planetarium was established in Sharjah, UAE. Now there are six planetariums in operation. The newest one is located inside SAASST, it is the largest in the region with an 18 m diameter and 200 seat capacity.

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