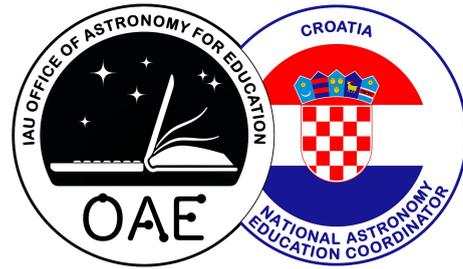


Astronomy Education in Croatia



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 formal schooling at aged 6 or 7. Nursery and Kindergarten are not obligatory but children have to attend 3 months of pre-school. Then follows eight years of primary education. Secondary schools are not compulsory. Students can attend vocational schools for three or four years or gymnasiums for four years. After 4 years of high school, students can enroll in different universities. There are also private (independent) schools that charge fees and religious ones. Most schools are Croatian language and there are several international.

Education facilities: Croatian schools have typical class sizes under 30 pupils with practical subjects like science, art and technical subjects having specialized classrooms especially in high schools. Some small rural schools only have a few pupils per school year with teachers teaching groups from multiple years together. All schools have access to running water and good internet connections. School buildings are generally well-maintained.

Governance and organisation: Public (state) schools are run by local district and city councils. The Curriculum is set by the Ministry of education and is the responsibility of the Minister of education. The curriculum was last reformed in 2018, but we are still going through the reform gradually adding it to different grades of students.

Teacher Training: After satisfying the appropriate student's scores on the high-school exit exam, students (18 or 19 years old) are allowed to enroll in higher educational institutions, which mostly consists of undergraduate (3 years) and graduate (2 years) studies, or integrated 5 years studies. Early primary school teachers (1st to 4th grade, students 6/7 to 10/11 years old) mostly study at the Faculties of Teacher Education. Upper classes physics teachers (7th and 8th grade, students 13/14 and 14/15 years old), as well as secondary school physics teachers (students up to 18/19 years), study mostly through a three-year undergraduate study of general physics followed by an educational physics (alone or accompanied with Mathematics, Computer Science, or even Philosophy) graduate studies – teacher training programs. One university, of four universities offering educational physics studies, hold integral studies.

During the last few years there is an evident lack of the students enrolling physics teacher studies, and consequently lack of students finishing mentioned studies. So, it is not uncommon to find the physics teacher without formal education. Pure astronomy or astrophysics studies at universities are not offered in Croatia. Astronomy teacher training for teachers that teach it in their schools is provided by the Agency for education (<https://www.azoo.hr/index.php>). Usually those are two-day seminars once a year. During those seminars training is usually provided by experienced teachers and scientists.

Astronomy in the curriculum: There is no official curriculum for Astronomy education. Students are introduced to astronomy through popular lectures given by scientists from universities and astronomical observatories. In larger and some smaller cities continuing astronomy education is organized in several primary and secondary schools. In these schools there are astronomical groups led by teachers of different profiles (teachers of physics, mathematics and engineering).

In primary school astronomy is sometimes taught as an extracurricular activity to students 10 to 15 years old. Students acquire basic knowledge of astronomy, observe the sky, solve tasks and do research work. Its voluntary and usually the teachers design their own curricula for the students depending on their previous knowledge or willingness to participate in national Astronomy competitions.

In high schools, astronomy is also an additional activity or elective subject. If astronomy is an elective subject then students' knowledge is evaluated and graded. The status of astronomy as a subject in school depends on the organizational capabilities of the school and the interest of the students. High schools that have astronomy as an elective subject often organize classes through two groups – elementary and advanced. Students go first to elementary and then to advanced astronomy classes, deal with experimental work and prepare for competitions in astronomy.

Astronomy education outside the classroom: There is traditional continuous support in astronomy education (summer schools, courses, workshops etc.) which has lasted for more than a century and is mainly provided by a few astronomical observatories. School groups are welcome to observatories and planetariums. Some of the local astronomy clubs organize public events like lectures, workshops and observations, and along with observatories assist the students in the development of astronomical projects.

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