

Astronomy Education in Romania



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 education at the age of 6 with a preparatory year before entering primary school. Kindergarten is optional starting at an age of 3. Education is compulsory until 10th grade (highschool). Primary school, middle school, and highschool each comprise of 4 years of study, totaling 13 years of education including the preparatory year. At the end of middle school (8th grade) students take a National Exam. Based on their grades at the exam (80%) and their average grades during middle school (20%) students are automatically assigned to highschools. At the end of the highschool there is a Bacalaureate exam. The Bacalaureate is considered in various proportions as entrance grade by Romanian universities. All 13 years of education at public (state) schools are free of charge. There are also private (independent) schools which usually charge fees. Whatever form of education -state or private -schools receive a certain budget per student. In Romania live over 15 national minorities where students learn in their mother tongue: Hungarian, German, Slovakian, Bulgarian, Greek, Romani (Gypsy). In these schools students learn Romanian as a second language

Education facilities: Romanian schools have typical class sizes of 25 pupils but no less than 15 and no more than 30. In rural areas with low numbers of students classes are merged with a teacher teaching 2 different subjects in parallel (usually in the first half of the time to one class and in the second half to the other class). Typical lectures are 50 minutes long followed by a 10 minute break. Some schools allow for a 20 minute break after the third lecture. In rural areas busses are provided to transport students to school and back to their villages. About 8.5% of students do not have Internet access at school (according to a statement done by the Ministry of Education and Research in 2020). During the past 30 years many schools have been upgraded but there are still some, especially in rural and under developed areas which lack some basic commodities

Governance and organisation: Public and private schools are run by a manager (usually a teacher in the school) and are supervised by School Inspectorates as subordinated institutions of the Ministry of Education and Research. The Curriculum is set by the central government in Bucharest and is the responsibility of the Ministry for Education and Research. Up to 25% of the curriculum can be adapted by teachers to fit the class and their objectives. The curriculum was last reformed in 2014 for primary education and 2017 for middle education. Private schools must also adhere to the national curriculum since they are partially funded by the government.

Teacher Training:

1. How can a person become a teacher? Teachers usually hold undergraduate degrees in their respective fields. Some science faculties offer Astronomy, Celestial Mechanics and/or Astrophysics lectures as part of their curricula. To be able to teach, teachers must hold a

Certificate in Psychopedagogy provided by a university. Alternatively, a person can pursue a master degree in education

2. How can a person get a job as a teacher? After 1 year of experience a new teacher must pass a "Definivat" exam (taken each year in June at a national level). The minimum admission grade is 8. Jobs are either tenured or non-tenured. To get a tenured position the candidate must pass an exam called "Titularizare" with a minimum grade of 7. If one obtains a lower grade then he/she can hold a non-tenured position for up to one year.
3. How can a teacher advance in their career?
 - a. **Grades:** Over the course of his/hers teaching career, a tenured teacher can advance to Grade 2 and later Grade 1 (which can be equivalent to obtaining a PhD degree).
 - b. **Continuing education courses:** Throughout their career, teachers also participate in teacher training courses/programs offered by "Training Teacher House" or universities or other accredited institutions. For astronomy there is a continuous education course offered by the Training Teacher House in Suceava, and also specific teacher training projects offered in partnership between Teacher Training Houses and other institutions in Romania. In addition, annual educational programs organized by ESERO Romania (European Space Education Resource Office) contain aspects related to astronomy and telescope usage for teachers.

Astronomy in the curriculum: There are no specialised school courses in astronomy. Instead, astronomy related content can be found in Geography, Mathematics, and Physics starting from kindergarten up to highschool.

Astronomy education outside the classroom: In Romania there are numerous astronomy clubs, observatories associated with museums, the National Children's Place, and NGOs which provide non-formal and occasionally formal education activities to students and the general public.

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