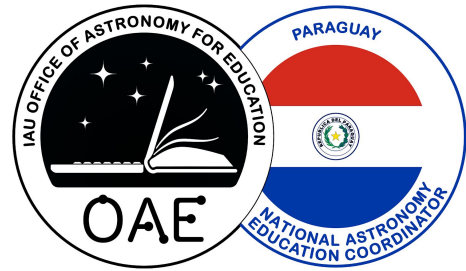


Astronomy Education in Paraguay



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: the curriculum is divided into 3 levels, begins with two years of non-obligatory Initial Education (kindergarten) at the ages of 3 or 4, and then continue to Basic School Education at the age of 6 which is obligatory, it is composed of nine grades with an extension of one year each divided into 3 cycles. Then it follows Medium Level (Secondary) which is non obligatory and has an extension of three years, it has two modalities to follow, Science Secondary where students have as a choice different emphasis as Arts, Literature, Social Sciences and Technology, etc. and Technical Secondary with emphasis on Nursing, Computer Science, Constructions, etc.

There is as well a level that offers Basic Education to people older than 15 years who have not had access to Basic School Education and the degree is equivalent to it; it has a three-year extension. 18 years old students who haven't been able to access to secondary have the opportunity to achieve an equivalent degree in a faster way that is summarized in two years.

Those twelve years and the alternatives to it are free of charge at state schools, there's also private schools which charge of fees to students and account for the 10% of the pupils, as well as subsidized schools that are funded in part by the state and the students through the charge of fees and represent the 12% of the pupils.

Classes are given in the mother tongue of the students while this language is Guaraní or Spanish, and if it's different they have the chance to choose between those two languages.

Education facilities: the sizes of the classes varies between public schools and private schools as well between rural and urban schools. At public urban schools you can find up to 60 pupils per class and at rural schools you may find class with just 1 or 2 pupils. Urban schools have access to water and electricity but this is not guaranteed in rural ones. The majority of the public schools doesn't have an internet connection.

There are some boarding schools in which students lives from Monday to Friday giving them a permission to go home on weekends.

The buildings of public schools are mostly deteriorated, as well as the chairs and others classroom instruments.

Governance and organisation: public schools are managed by a principal who is chosen through an open competition, principal management is under the control of supervisions divided by zones and supervisions are accountable to the Education and Science Ministry. The curriculum is set by the government through Education and Science Ministry, the last reform occurs in 1991 though and small adjustments were made in the past 28 years.

Teacher Training: the first two cycles of Basic School Education teachers are instructed in universities or centers known as Teacher Training Institutes and achieve a teaching degree. Those

teachers of the third cycle and high schools teachers have the possibility to continue their education and specialize in specific subjects as Social Sciences, Economic Sciences, etc. that enables them to teach in related courses. There is also the possibility of getting an undergraduate degree on those areas and then take a specialization on teaching, by example to get a mathematician degree and a specialization that will allow them to teach math.

Once in service there are courses and workshops designed by institutions authorized by the Ministry and have a 100-hours extension.

Astronomy in the curriculum: there are no specialized courses of astronomy, astronomy content can be found under Natural Sciences courses both in Basic School Education and Medium Level.

Basic School Education students learn about the solar system distribution and the sun and Medium Level Students learn about the structure of the Sun and the Earth, and about the Earth movements.

Astronomy education outside the classroom: there are some Science and Astronomy Club, mostly in the urban zone, that organizes talks and workshops. There are also competences as the Physics Olympiads that develops topics as special relativity and gravitation, and the Astronomy and Astronautics Olympiads which develops topics as observational astronomy, spherical astronomy, astrophysics, astrodynamics, celestial mechanics and others.

**The International Astronomical Union's National Astronomy Education Coordinator (NAEC)
Team for Paraguay:** Pedro Acosta (Chair), Jorge Meza (Contact Person)

For specific information about astronomy education in Paraguay or on this document please contact the Office of Astronomy for Education (oea@astro4edu.org).