Astronomy Education in
Philippines

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: As of 2013 the Philippines adapted a 12-year compulsory education through the implementation of R.A. 10533 or the Enhanced Basic Education Act of 2013. Private institutions are allowed flexibility in the adaptation as long as they comply with the prescribed minimum standards consistent with the Act. R.A. 10533 is also designed to be inclusive to programs for the gifted and talented, learners with disabilities, Muslim learners (Madarasah), indigenous people, and for learners under difficult circumstances (geographic isolation, chronic illness, displaced learners, etc.).
The curriculum is designed to develop proficiency in English and Filipino, however due to the diversity of languages in the country the regional native language is also being observed as the fundamental language of education or the Mother Tongue-Based Multilingual Education (MTB-MLE).

Education facilities: While standards for facilities are prescribed by the Department of Education (DepEd), conditions vary greatly in different areas, especially with public schools concerned. Areas with a shortage of classrooms observe shifting classes or put up make shift classrooms. About 26% of public schools are able to connect to the internet, while nearly 5000 remote public schools don't have access to electricity.

Governance and organisation: The Philippine government observes a trifocal education system. Primary and secondary education in the Philippines is overseen by the DepEd, with the exception of the Philippine Science High School (PSHS) System which is primarily overseen by the Department of Science and Technology. The Commission on Higher Education (CHED) oversees tertiary degree programs. The third focus is on non-degree technical-vocational programs. Curriculum development for the basic education is developed by the DepEd Office for Curriculum and Instruction and supervised by the Curriculum Consultative Committee. The curriculum is designed using a spiral progression approach for mastery, and is flexible to allow schools to adapt their respective educational and social contexts. DepEd addresses the need of students with higher aptitude for science and math through programs such as the Special Science Education Schools Projects at the elementary level, Regional Science High School Union for junior high school, and STEM for senior high schools. For high schools the PSHS System and the RSHS Union have higher standards of science and math education than STEM high schools.

Teacher Training: During the transition to K to 12 selected science teachers were sent to the the University of the Philippines National Institute for Science and Mathematics Education Development as part of the National Training of Teachers to serve as regional trainers. Other aspects of teacher qualifications and training are covered in R.A. 10533 and the amended Philippine Teachers Professionalization Act.

Astronomy in the curriculum: Astronomy first appears in the curriculum in the 4th quarter of grade 3 science under Earth & Space which also covers geology and meteorology. The coverage of astronomy ends in grade 9, and is continued in grade 11/12 under SHS Core Subjects – Earth and Life Science, Earth Science, and Physical Science. From grade 3–9 topics are focused on solar system objects, constellations, as well as local beliefs and practices associated with these objects. Under SHS subjects the topics covered are the formation of the Universe and the solar system, nucleosynthesis, historical models of the Universe, relativity and the Big Bang. For some schools under the PSHS system astronomy is offered as an elective subject.
There are only two HEI's offering formal degree programs in astronomy in the Philippines (Rizal Technological University, and New Era University). Other than formal degree programs, there also exists astronomy and astronomy-related courses under physics programs in different universities. Majority of these courses are subjects for physics majors while a few exist that are general education courses. Physics students and faculty also sometimes undertake research that may be related to astronomy or astrophysics.

Astronomy education outside the classroom: Astronomy is most frequently promoted to the public through programs initiated by astronomy interest organizations, the bulk of which are student groups (mostly collegiate organizations). Activities conducted by astronomy organizations usually include public lectures, telescope viewing events, and camps. A National Astronomy Week is celebrated every third week of February and is led by the Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA). Aside from astronomical interest groups we also have private and government-run observatories, planetariums and mobile planetariums, and science museums which caters to students and the general public. A few schools and universities have their own planetariums. There are also after school programs with a space and astronomy focus.
Since the Philippines is geographically divided as an archipelago the bulk of organizations and events are located in the National Capital Region, and the major island group of Luzon. The remaining two island groups (Visayas and Mindanao) have much lesser astronomy groups with the bulk being in Cebu City in the Visayas.

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