

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Interactive Presentations (IP)

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GENERALITY OF AERONAUTICS & ASTRONAUTICS: AN INNOVATIVE AND CONSTRUCTIVE
COURSE TO UNDERGRADUATES AND GENERAL PUBLIC

Abstract

Generality of Aeronautics Astronautics is the undergraduate course that was firstly given in 1953 as a selective course in Beihang University. The purpose of opening such a course in 1953 was to provide some fundamental principles and techniques of aeronautics and astronautics for engineering students who wanted to have their careers in aircraft and spacecraft engineering, space exploration, air industries, teaching, research, many related technology-intensive fields. As time goes by, this course has evolved into a compulsory and core common course for all first year undergraduates with background of science, engineering, human arts, law, etc. in Beihang University. The course accounts for 2 credits and takes 32 class hours. For the past ten years, 3600 undergraduates each year in Beihang University take this course and are educated with basic space science, astronautics, and aeronautics. After more than 60 years, this course has developed into a course that has a very large impact on space education for undergraduate students and for those who are interested in space. Recent years, the modified course has been available on internet, making more and more people to have a chance to learn knowledge on space science, astronautics and aeronautics. It is one of most popular MOOCs in China and is one of the first sharing course of national elaborate resources in higher education, China. Till the end of 2016, more than 50,000 students have taken this course both inside campus and on internet. The paper describes the mission of the course, the structure of the course, how the course is taught and is learned, and how the teaching impact is measured. The paper also presents the differences of course be taught inside the campus and the course given on internet, like the different teaching method, different assessment measure for learning outcome for different targeted groups (undergraduates, and general public).