

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
On Track - Undergraduate Space Education (3)

Author: Dr. Mohammad Ebrahimi  
Aerospace Research Institute, Iran, mebrahimi@ari.ac.ir

HOW A STUDENT CANSAT COMPETITION HELPED US DEVELOP QUALIFIED WORKFORCE

**Abstract**

Attracting graduates in majors other than aerospace and mechanics has long been a difficult job for our research institute. Engineers in these areas seldom learn about the opportunities provided for them in space sector and even when they get to know about them are very skeptic in getting involved. Recently, we had a very good experience in attracting electrical and telecommunication students to join the space sector through hands-on practice in a series of student Cansat competitions. These enthusiasts never had a chance for being in process of developing systems for flight conditions including acceleration, vibration and shock. Involving in competitions with the help of our experts let them design, construct, test, approve and fly their small payloads. Little by little they improved their abilities and at the same time were more and more motivated for flight campaigns.

Finally, we could spot three capable undergraduate students with majors in electrical engineering who adapted themselves to the standards of a professional career in a space institute. Now we are more than satisfied working with them in developing real life space subsystems.

We later systematically implemented a method of workforce development through and by delicately designing missions for our Cansat competitions. Students gather in teams and compete in a dynamic atmosphere and at the end some find a part in our team. No doubt they need more training effort to become a professional, but it is sure that they have the sense and will to move ahead. This is a model which can be upgraded and used with more success in other areas of interest such as space physiology and astronomy. The model is described in detail in this paper.