RUSSIAN FEDERATION

Samara State Aerospace
University

СГАУ

COURSE
CERTIFICATE

Department of Space Research

Advanced technologies for nanosatellite's experiments in space

3.5 ECTS

Aliaksei Ivanou
01/12/1988

has successfully completed the above two-week course (70 hours) 30/08/2013

The aim of the course is the design of scientific nanosatellites using state-of-art computer technologies. Course includes an introduction into advanced space technologies for Low Earth Orbit satellites.

Vice rector, Professor

V.D. Bogatyryov

Head of School, Professor

I.V. Belokonov

Leading lecturer, Professor

Fernando Aguado
(University of Vigo, Spain)

Course syllabus

Lectures

1. Space system engineering and standards

2. Flight Dynamics and Attitude Control

3. Global navigation satellite systems: fundamentals and hardware

4. Micro/nanosatellites

   4.1. Mission and system requirements

   4.2. Functional architecture and operational modes

   4.3. Link budget

   4.4. Power budget

   4.5. Advanced Space Technologies

5. State-of-the-art information technologies for microsatellite's design (Pro Engineer)

Laboratories

1. Using Pro Engineer to design micro/nanosatellites

2. Developing system requirements and mission requirements

3. Link budget computation

4. Power budget computation

5. Practical example of the work with the satellites: NOAA reception