

UNISEC-Japan Regional Report 2017

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Outline

- Overview of UNISEC-Japan
- Activities of 2017
- UNISEC-MEXT project

Overview of UNISEC-Japan

- UNISEC: “University Space Engineering Consortium”
 - UNISON: UNISEC Student Organization
 - UNISAS: UNISEC Alumni Organization
- Established in 2002
- NPO/NGO to facilitate/promote university level students’ practical space development activities, such as designing, manufacturing and launching small satellites and hybrid rockets.
- 72 laboratories/groups from **50 universities**
- **938 student members**, 267 individual supporters, and 21 corporate supporters
- 3 pillars: Human resource development,
Technological development, Outreach



Activities in 2017

- March 3: Takumi Conference
- July 30: General assembly
- August 17-22: Noshiro space event (CanSat, Rocket)
- September 7-16 : CLTP8 (CanSat Leader Training Program.)
- September 10-15: ARLISS (A locket launch for international student satellites) – CanSat
- December 9-10: Annual Workshop
- January 27: UNISEC 15th anniversary event

CanSat Leader Training Program (CLTP)



Objective: CLTP is a training program for professors/instructors to learn how to conduct CanSat training by experiencing it. Participants are expected to teach their students after training. It has contributed to capacity building in basic space engineering and technology.

Launched: October 2010

Offered: Annually

Graduated: 73 participants from 34 countries



Launch Experiment



CanSat Manufacturing



Vibration Test



Paper craft Rocket

CLTP History & Participants

73 participants from 34 countries

CLTP1 (Wakayama Univ. in Feb-March, 2011)

12 participants from 10 countries, Algeria, Australia, Egypt, Guatemala, Mexico, Nigeria, Peru, Sri Lanka, Turkey (3), Vietnam.

CLTP2 (Nihon Univ. in Nov-Dec, 2011)

10 participants from 10 countries, Indonesia, Malaysia, Nigeria, Vietnam, Ghana, Peru, Singapore, Mongolia, Thailand, Turkey.

CLTP3 (Tokyo Metropolitan Univ. in July-August, 2012)

10 participants from 9 countries, Egypt (2), Nigeria, Namibia, Turkey, Lithuania, Mongolia, Israel, Philippines, Brazil.

CLTP4 (Keio Univ. in July-August, 2013)

9 participants from 6 countries: Mexico(4), Angola, Mongolia, The Philippines, Bangladesh, Japan.

CLTP5 (Hokkaido Univ. in Sept 8-19, 2014)

7 participants from 5 countries, Korea (2), Peru, Mongolia, Mexico (2), Egypt.

CLTP6 (Hokkaido Univ. in August 24-Sept4, 2015)

8 participants from 8 countries: Angola, UN(Austria), New Zealand, Tunisia, Turkey, Egypt, Bangladesh, Mexico

CLTP7 (Hokkaido Univ. in Sep 21-Oct 1, 2016)

8 from 7 countries: Egypt, Myanmar, Peru, Nepal (2), Mongolia, Serbia, Dominican Republic.

CLTP8 (Nihon University in Sep 7-16, 2017)

8 from 7 countries: Egypt, Turkey, Bolivia, El-Salvador, Malaysia, Japan (3), Nepal.



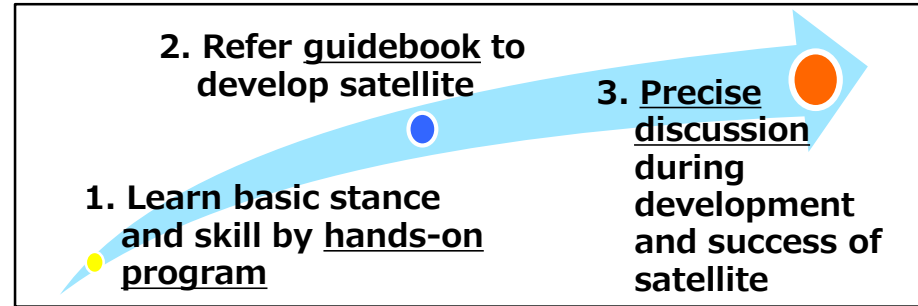
UNISEC-MEXT project

- Development of International Space Human Resources for Sustainable Development and Utilization of Nano-satellite
- Competitive funding from Ministry of Education, culture, sports, science and technology.
- 3-year project (November 2015-March 2018)
- Motivation: to make utilization of nano-satellites sustainable by increasing success rate in nano-satellite projects.

Summary of the UNISEC-MEXT Project

Development of education program and place for discussion on student satellite

- Development and spread of education tools and text
- To provide the place for discussion (communication) on nano-satellites
- To produce young engineers and researchers for sustainable space utilization



1) Hands-on training program for basic skill of nano-sat development

- Education tools and textbook
- Hands-on program
- Broadcast of the program by internet



i-CanSat

Hepta

3) Review (discussion forum) for nano-sat

- Voluntary review committee
- Review (discussion forum)
- Improvement of review (discussion) and guidebook



2) Guidebook for CubeSat

- Tips from mission design to launch and operation
- Review (discussion) guide
- Two CubeSats will be developed
- (Available for nano-sats larger than CubeSat)



SPROUT

NEXUS

4) Dissemination

- "On site" Lecture
- UNISEC-Global (Deorbit Device Contest)
- Web site to introduce satellites by UNISEC member



Contest

Lecture