



APSCO's Approach to Capacity-Building in Space Law and Policy

UN/Turkey/APSCO Conference on Space Law and Policy

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Independent / Non-Profit / Inter-Governmental / Regional (Asia-Pacific Region)

Full International & Legal Status / Convention registered under Art. 102 of the UN CHARTER



Multi-Lateral Cooperation in the Asia-Pacific Region

Member State

Associate Member

Signatory State

Observer State



Vast Geographical Area

Enormous Population

Various Natural Disasters

Mostly Developing Countries

Powerful Driving Force

High Technology, Risk, Investment

Equitable Representation

The way APSCO defines its role

- **Strategic Planning & Program Management**
 - **Space Cooperative Networks**

- **Education & Training**
 - **Talent Cultivating**

- **Program Operation & Data Service**
 - **Disaster Management & Space Applications**

- **External Relations & Legal Affairs**
 - **International Symposiums / Space Law & Policy**

**Facilitates
the Capacity
Building for
Developing
Countries**

UNISPACE+50 4 Pillars

Space Accessibility

Space Society

Space Economy

Space Diplomacy

Capacity-building, training and education in space law

- helps to promote international development
- helps to promote cooperation in space activities
- provides deeper understanding of the interdependent roles of science, technology and law in this area.

Educational Purposes

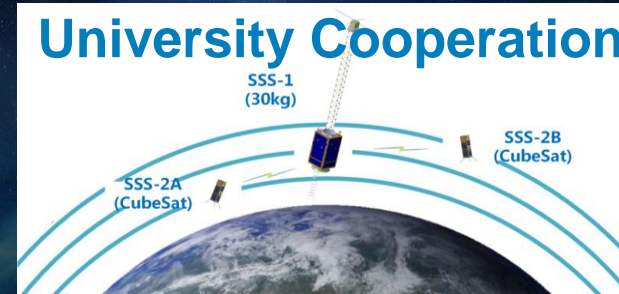
- (a) strengthening the space law education at the regional and global level.
- (b) developing the skills and knowledge of participants, through training program on space law and policy related to space technology application that can contribute to the exploration and peaceful uses of outer space and sustainable development in each country;
- (c) implementing the United Nations Programme on Space Application better , through the training program on space law and policy;
- (d) conducting an useful trial to use the Education Curriculum on Space Law prepared by UNOOSA.
- (e) providing information related to national space legislation and policy for the participants;
- (f) promoting the exchange, understanding and cooperation in the areas of space law education.

Four Ways of Capacity-Building — Students & Professionals

- Master & PhD
- BUAA & HIT & NPU
- Full Scholarship Support



- Space Education Curricula Development
- Student Small Satellite (SSS) program



- On-line Training
- On-site Training
- Centralized Training

- Space Science School
- APSCO Microsatellite Contest
- Space Innovation Contest
- Cansat International Competition

Degree Education (1/3)

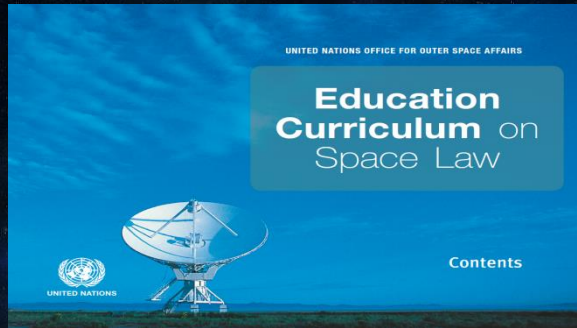


Countries	Master	Doctor	Total
Bangladesh	18	4	22
Iran	23	22	45
Mongolia	40	4	44
Pakistan	46	17	63
Peru	29	2	31
Thailand	35	14	49
Turkey	15	2	17
Indonesia	11	-	11
Laos	1	-	1
Sri Lanka	1	-	1
Total	219	65	284

- 3 Top Universities: BUAA, HIT, NPU
- Around 40 Students/Year
- 155 Graduated (including 14 Ph.D.)
- Full Scholarship Support from China and APSCO
- Including pre-admitted students for DE Program 2019



Education Curriculum on Space Law



The final version of this curriculum (ST/SPACE/64) was completed in 2013.

- Module 1.** Basic concepts of international law and space law

- Module 2.** International law and other regulations applicable to remote sensing, geographic information systems, satellite meteorology and global climate activities

- Module 3.** Satellite communications and applicable international law and other regulations

- Module 4.** Global navigation satellite systems and applicable international law and other regulations

Master Program on space Law and Policy(2016)

- Beihang University has set up a new Master Program on Space Law and Policy under MASTA2016.
- 11 participants funded by CSC/BUAA Scholarships were recruited from the member states of RCSSTEAP and APSCO.
- Mongolia(2*), Pakistan(3), Thailand(2), Nigeria(1), Bolivia(1), Venezuela(1), Turkey(1).
- * 1 student from Mongolia has changed her major.

Course Description

Lectures are in English. The thesis should be written in English. Courses are organized into three modules as given above.

Educational Measures

- (a) Students and supervisors interact to confirm the supervisor and create the education program.
- (b) Platform courses are primarily instructed in lectures with self-study as supplement.
- (c) Major courses are instructed as lectures, self-study, and seminars.
- (d) practical research 8 weeks (either in China or in students' home country, 4 weeks for law practice, 4 weeks for team report)

Testing Method and Requirement

- (a) Examination of platform/Major courses is performed in written form.
- (b) For Law practice, students are required to write Law practice reports, which should be evaluated by supervisor.

• Courses design

The following factors should be considered:

1. The content of ST/SPACE/64 (reference use).

2. The requirements of MASTA training program

9 months course study

credits---platform courses(≥ 11)+major courses(≥ 11)+Legal Practice(8)

note: 1 credit = 16 class hours

3. The professional background of students

4. Future career of students

5. The combination of space law and space science & technology

9-month Course Study Schedule

No.	Item	Class Hrs	Credits	Remark	Semester	Lecturer
Module I Platform Courses						
PC1-1	Introduction to Space Technology Application	32	2	Compulsory	Fall	
PC3-1	Space Environment, Orbit and Spacecraft Systems	48	3	Compulsory	Fall	
PC3-2	Basic theory of law	32	2	Compulsory	Fall	
PC3-3	Space Technology and Space Economy	18	1	Optional	Fall	
PC4-1	Introduction to China and Chinese Language	54	3	Compulsory	Fall	
Module II Major Basic Courses & Major Courses						
MC2-1	Basic concepts of international law and space law	32	2	Compulsory	Fall	
MC2-2	National Space Policy	16	1	Compulsory	Fall	
MC2-3	National Space Legislation	32	2	Compulsory	Spring	
MC2-4	Legal Issues related to RS&GIS	16	1	Compulsory	Spring	
MC2-5	Legal Issues related to Satellite Communication	16	1	Compulsory	Spring	
MC2-6	Legal Issues related to space environment protection	16	1	Compulsory	Spring	
MC2-7	Space commercialization and the development of Space Law	16	1	Compulsory	Spring	
AL2-1	Hot Topics on Space Law I	16	1	Compulsory	Spring	
AL2-2	Hot Topics on Space Law II	16	1		Spring	
Module III Team Pilot Projects						
PP	Team Report/Law practice	8Weeks	8		Spring	

9-month Course Study Schedule

No.	Item	Class Hrs	Credits	Remark	Semester	Lecturer
Module I Platform Courses						
PC1-1	Introduction to Space Technology Application	32	2	Compulsory	Autumn	
PC3-1	Space Environment, Orbit and Spacecraft Systems	48	3	Compulsory	Autumn	
PC3-2	Basic theory of law	18	1	Compulsory	Autumn	
PC3-3	Space Technology and Space Economy	18	1	Optional	Autumn	
PC4-1	Introduction to China and Chinese Language	54	3	Compulsory	Autumn	
Module II Major Basic Courses & Major Courses						
MC2-1	Basic concepts of international law and space law	32	2	Compulsory	Autumn	
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MC2-3	National Space Legislation	32	2	Compulsory	Spring	
MC2-4	Legal Issues related to RS&GIS	16	1	Compulsory	Spring	
MC2-5	Legal Issues related to Satellite Communication	16	1	Compulsory	Spring	
MC2-6	Legal Issues related to space environment protection	16	1	Compulsory	Spring	
MC2-7	Space commercialization and the development of Space Law	16	1	Compulsory	Spring	
AL2-1	Hot Topics on Space Law I	16	1	Compulsory	Spring	
AL2-2	Hot Topics on Space Law II	16	1		Spring	
Module III Team Pilot Projects						
PP	Team Pilot Project	12 Weeks	8		Spring	

Outcome of MASTA 2016 on Space Law and Policy

Graduated in 2018

1	male	Thailand	Thai Space Legislation In Present and Future Perspective
2	male	Turkey	Legal Issues on Asteroid Mining
3	female	Mongolia	A study of relationship between AOT and air pollution using Remote sensing and GIS: A case study in Ulaanbaatar, Mongolia (Changed Major)
4	female	Mongolia	Research on legal issues of space debris removal
5	male	Pakistan	Current situation and future prospective of Pakistan National Space Legislation

One of the graduates is currently serving as Int Staff of APSCO

Second batch of students on Space Law and Policy - MASTA 2018

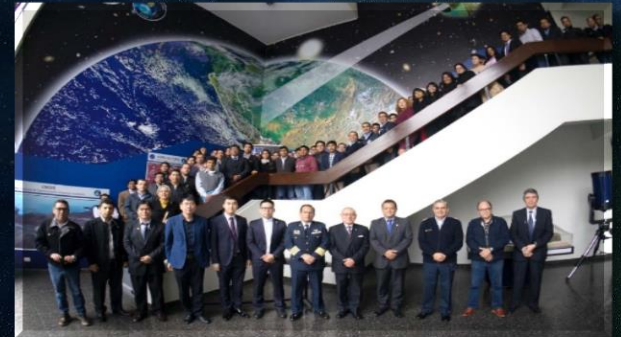
1	Sep 2018	female	Peru	Space Law and Policy
2	Sep 2018	male	Turkey	Space Law and Policy
3	Sep 2018	female	Iran	Space Law and Policy
4	Sep 2018	female	Iran	Space Law and Policy
5	Sep 2018	female	Thailand	Space Law and Policy
6	Sep 2018	female	Thailand	Space Law and Policy
7	Sep 2018	female	Mongolia	Space Law and Policy
8	Sep 2018	male	Bangladesh	Space Law and Policy

Existing problems

1. Curriculum design needs to be further discussed.
 - add new courses and cancel some courses
2. It is difficult to some students to understand all the content of the curricula because of their background or communication level.
3. The lecturers should adopt newer teaching methods.
4. enrich the legal practice.

Short Term Training Courses

- 25 Centralized trainings (212 days)
- 7 on-site training (28 days)
- 7 on-line training
- 32 Asia-Pacific countries
- 5 African countries
- More than 1100 trainees



Objectives of Trainings on Space Law

- (a) strengthening space law education at the regional and global level;**
- (b) developing the skills and knowledge of participants;**
- (c) conducting a useful trial to use the Education Curriculum on Space Law prepared by UNOOSA;**
- (d) providing information related to national space legislation and policy for the participants;**
- (f) promoting the exchange, understanding and cooperation in the areas of space law education.**

Short term program on space law (2015)

- APSCO organized a short-term training program on space law and policy in Beijing from 17-25 September 2015.
- Beihang University Institute of Space Law and China Institute of Space Law co-organized the program.

Indented audience

- Postgraduate students
- PhD students
- Post-doctoral researchers
- Junior Engineers
- Any researchers who wish to broaden and enhance their knowledge and skills.

Opening Ceremony



Lecturers

- Invited the most famous scholars from China and other countries
- 15 lectures from U.S., Canada, Sweden, France, Germany, P.R. China and H.K.



Mr. Arnel Kerrest



Mr. Stephan Hobe



Ms. Andrea J. Harrington



Ms. Joanne Gabrynowicz



Mr. Niklas Hedman



Mr. Li Juqian



Mr.Wang Guoyu



Ms.Wang Jilian



Ms. Wu Xiaodan



Ms.Xia Chunli



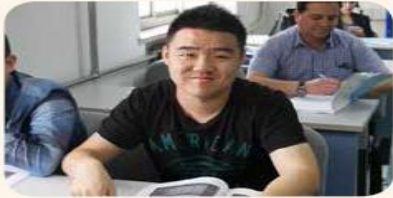
Mr.Zhang Zhenjun



Mr.Zhao Yun

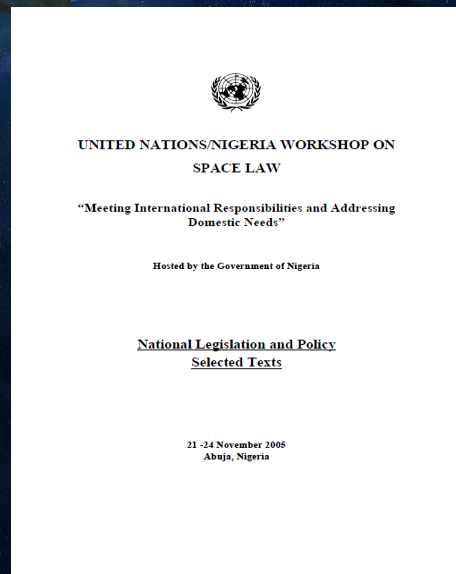
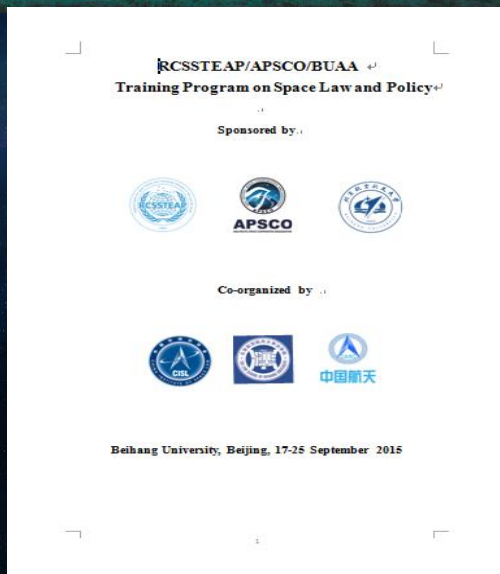
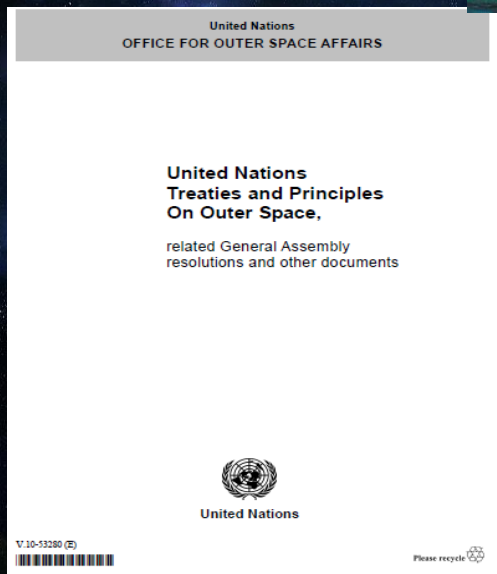
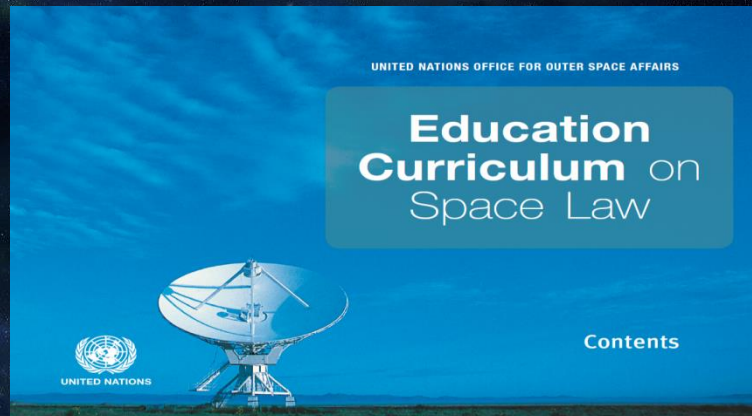
Participants

- Nearly 40 participants from Bangladesh, Brazil, China, Egypt, Indonesia, Mongolia, Pakistan, Peru, Thailand, Turkey, Venezuela attended the training program.
- Participants also include young scholars from BUAA, BIT, CUPL, Beijing Institute of Space Science and Technology Information, China Academy of Launch Vehicle Technology and Ministry of Foreign Affairs.



Training Materials

- *Collection of Presentations*
- ***National Legislation and Policy: Selected Texts***
- ***United Nations Treaties and Principles On Outer Space***
- ***Education Curriculum on Space Law***



The Forum forms part of learning cycle


2015 Space Law & Policy Forum



Space Law & Policy Workshops

Time	Place	Theme	
November, 2009	Iran	Role of International Space Law in the Development and Strengthening of International and Regional Cooperation in the Peaceful Exploration and Use of Outer Space	
November, 2010	Thailand	Activities of States in Outer Space in Light of New Development: Meeting International Responsibilities and Establishing National Legal and Policy Framework	
November, 2014	China	The Role of National Space Legislation in Strengthening the Rule of Law	

Space Law & Policy Forums

Time	Place	
June 2012	Beijing, China	
June 2013	Beijing, China	
September 2015	Beijing, China	
July 2017	Harbin, China	

APSCO/HIT Training Course on Space Law (Harbin, 2017)

The 4th APSCO SPACE LAW & POLICY FORUM-2017

10-12 July 2017 Harbin, CHINA



APSCO/TUBITAK-UZAY Training Course on Space Law (2019)

- Participants from 5 Continents
- Lawyers, Engineers and Diplomats
- Networking, active discussions,
- Training + Conference





To Be Continued



- A**ctive Involvement in international space affairs
- P**eaceful use of outer space
 - S**haring knowledge and experiences
- C**ollaborative gains with its Member States
- O**pen worldwide to international space communities

THANK YOU