The United Nations Curriculum on Space Law

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Background

UNISPACE III

- Vienna Declaration on Space and Human Development
  - Enhancing education and training opportunities
    - […] the training and professional development of teachers
    - exchange of teaching methods, materials and experience
    - development of infrastructure and policy regulation
  - Strengthening and repositioning of space activities in the United Nations system
    - promote efforts of the Committee on the Peaceful Uses of Outer Space in the development of space law

Workshops on Space Law

- The Hague
  - 2002
  - promotion of education in space law
    - university programmes and curricula for students and educators
    - short courses designed for professionals and decision makers
  - States to review their need for professionals in space policy and law
    - Educational programmes in space law to be developed in response to long-term needs
  - Regional Centres for space science and technology education to include a basic course on space law

Workshops on Space Law (cont.)

- Rio de Janeiro
  - 2004
  - Regional Centres to play an important role in building capacity in space law
    - Regional Centres in Latin America and the Caribbean to include space law

[UNISPACE III +5]

- Abuja and Kyiv
  - 2005; 2006
  - OOSA to develop a baseline course on space law
    - Regional Centres

UNISPACE III+5

- 2004
- Committee's Plan of Action (A/59/174)
  - OOSA to strengthen its capacity-building activities
    - continue to organize the series of workshops on space law
    - develop a model education curriculum for a short-term training course on space law that could be integrated into the education programme of the regional centres
- Endorsed by General Assembly in its resolution 59/2

Legal Subcommittee

- 2007
  - OOSA requested to continue exploring the possibility of developing a curriculum for a basic course on space law for the Regional Centres

Development Process

1st Expert Meeting

- 3-4 December 2007, Vienna, Austria
- 11 educators
  - Argentina, Brazil, Canada, Czech Republic, France, Germany, Italy, Netherlands, South Africa, Ukraine, United States
- Regional Centres
  - Brazil and Mexico
  - India
  - Morocco
  - Nigeria
- Basic structure and elements of the curriculum
- Via e-mail; side meetings

Legal Subcommittee

- 2008
  - Welcomed the development of curriculum
  - Consideration should be given to its usefulness to other educational institutions and training initiatives
  - Expert group enlarged (China, Chile, Colombia, Greece, Japan)
- 2009
  - Preliminary draft presented
  - Commended the work of the educators and representatives of the regional centres
  - Tool for the dissemination of knowledge on space law, especially in developing countries
  - Invited Member States to provide comments
  - Curriculum to be structured to also serve as a basis for other educational institutions and training initiatives

Draft Curriculum on Space Law

Regional Centres

- Established pursuant to resolution 45/72 of 11 December 1990
- Four regional centres
  - Africa
    - Morocco (French speaking countries)
    - Nigeria (English speaking countries)
  - Asia
    - India
  - Latin America
    - Brazil and Mexico

Regional Centres

- Develop indigenous capability for research and applications
- Core disciplines (9 month postgraduate courses)
  - Remote Sensing and Geographic Information Systems
  - Satellite Communications
  - Satellite Meteorology and Global Climate
  - Space and Atmospheric Sciences
- Two further disciplines
  - GNSS
  - Space Law

Structure of the Curriculum

- Two complementary modules
  - Module 1
    - all the fellows irrespective of course being taken
  - Module 2 through 5
    - module directly relevant to course being taken by the fellows

Structure of the Curriculum

- Module 1: Basic concepts of international law and space law
- Module 2: International law and other regulations applicable to remote sensing and geographic information systems; satellite meteorology and global climate
- Module 3: International law and other regulations applicable to satellite communications
- Module 4: International law and other regulations applicable to space and atmospheric sciences
- Module 5: International law and other regulations applicable to global navigation satellite systems (teaching module under development)

Structure of the Curriculum

Remote Sensing and Satellite Meteorology and Climate Change	SATCOMS	Space and Atmospheric Sciences	GNSS
Module 1	Module 1	Module 1	Module 1
+	+	+	+
Module 2	Module 3	Module 4	Module 5

Module 1

Basic concept of international law and space law

- All fellows
- Organization and duration
  - Five classes (10 hours of lectures; 6 hours of tutorials and practical exercises)
  - Spread over 2 week period
- Overall Objective
  - a basic reference framework for understanding legal principles, rules, approaches and fundamental legal issues pertaining to space activities

Main elements of the module 1

- I. Introduction to international law
- II. Legal regime governing the conduct of space activities
  - International treaties (OST, Rescue, Liability, Registration, Moon)
  - Principles (Broadcasting, RS, NPS, Space Benefits)
  - Other relevant topics (1721B, radio frequencies and GSO etc)
  - Important concepts specific to space law (Province of all mankind, Non-appropriation, etc)

Main elements of the module 1 (cont.)

- II. Legal regime governing the conduct of space activities (cont.)
  - National regulation of space activities (examples)
    - Authorisation and continuing supervision
    - Liability
    - Registration
  - Commercial and private use of outer space
  - Multilateral and bilateral agreements (some examples)
  - International intergovernmental organisations related to space activities (COPUOS, ITU, International satellite organisations)
- III. Settlement of disputes and enforcement of international space law

Module 2

Remote Sensing & GIS
and Satellite Meteorology and Climate Change

- Fellows attending 9 month postgraduate courses relating to RS/GIS and SatMet/Climate Change
- Organization and duration
  - Five classes (10 hours of lectures)
  - Spread over 2 week period
- Overall Objective
  - an overview of the basic legal context for, and the key legal concepts and terminology of, remote sensing and GIS, meteorology and global climate activities

Main elements of module 2

- Earth Observation Satellites
  - International (OST, RS Principles, UN-SPIDER, WMO, Space Benefits Resolution)
  - National (Canada, France, Germany, USA)
  - Global (Protection of Ozone Layer Convention, Montreal Protocol, Kyoto Protocol, etc)
  - Bilateral and Multilateral Agreements
  - Sources of Data (Civil government systems, Private commercial systems, Public-Private Partnership commercial systems, Databases, Archives)

Module 3

Satellite Communications

- Fellows attending 9 month postgraduate course relating to Satellite communications
- Organization and duration
  - Five classes (11 hours of lectures, 1 hour of tutorials and practical exercises)
  - Spread over 2 week period
- Overall Objective
  - an overview of the basic legal contexts, and the key international and national legal concepts, terminology, rules and principles related to Satellite Communications activities

Main elements of module 3

- Satellite Communications
  - Radio frequencies and orbital positions
  - International and national regulations
  - ITU Constitution, Convention and Radio Regulations
  - Selection of appropriate radio frequencies and orbital positions
  - Harmful interference and resolution of interference
  - National laws and regulations

Main elements of module 3 (cont.)

- Adoption and application of technical standards
- National licensing and regulation of operation of satellite services
- World Trade Organization regulations
- Global Mobile Personal Communication Services (GMPCS) procedures
- Regulation of direct satellite broadcasting contents

Module 4

Space and Atmospheric Sciences

- Fellows attending 9 month postgraduate course relating to Space and Atmospheric Sciences
- Overall Objective
  - an overview of the basic legal context and the key international legal concepts, terminology, rules and principles related to space and atmospheric science activities

Main elements of module 4

- Basic Concepts (Institutions, General Principles, International Co-operation)
- International Legal Regime Governing the Conduct of Space Activities (Radiocoms, Earth Observation, NPS, Liability, Ethics)
- International Legal Status of the Extraterrestrial Cosmic Environment (preservation of unique environment)
- Freedom of Space Exploration and Research
- International Protection of Scientific Results and Data
- International Co-operation in Space Exploration and Research (UNESCO, WMO, COSPAR, IAU, IAF, IAA)
- Bilateral and Multilateral Space Co-operation Agreements

Module 5

GNSS

- Fellows attending new course relating to Global Navigation Satellite Systems (under development)
- Organization and duration
  - Five classes (10 hours of lectures)
  - Spread over 2 week period

Main elements of module 5

- GNSS Technology
- Dual Use Technology
- Augmentation of GNSS
- Different Classes of GNSS Services (Standard, Precise)
- GNSS Institutions (Int'l, National)
- Legal Regimes (Int'l, National)

Main elements of module 5 (cont.)

- GNSS Providers (US, Russian Federation, Europe, China, India and Japan)
- GNSS Legal Problem (continuity, financing, universal access, sole use etc)
- Legal Rights of Privacy
- Legal Protection of GNSS Data
- International Trade Issues

Resources

- List of resources in the public forum
  - Text books
  - Other references and resources
- Languages
  - English
  - French
  - Spanish
  - Other official languages of the United Nations

Conclusion

- 2nd Expert Meeting
  - 12-13 November 2009, Tehran
  - Harmonizing form and content
  - Enhance resources materials
  - Ensure that curriculum can serve as a basis for other educational institutions and training initiatives
- Peer review and finalization