

Outer Space Law

V Semester (LL.B.) - Optional Course

The entry into the outer space is undoubtedly the greatest achievement of the twentieth century. The pleasant event of space exploration has resulted in the rapid developments in the scientific and technological field. But at the same time it carried number of problems requiring legal solutions. Consequently, the space law started to emerge as a separate branch of international law. Now with the enormous development in the field of space technology, the legal regime of the outer space is overlapping with the municipal laws, such as law of financing, intellectual property law, tort law, criminal law, information technology law and so on. Therefore the space law, which has started as an offspring of international law, has now percolated into the municipal sphere and has gained tremendous importance in the present century.

Objective of the Course: The major objective of the course is to look into the legal regime governing outer space, the moon and other celestial bodies, and its implications on the recent scientific and technological developments. The course is offered independently of air law with an objective of having an in depth study of the outer space regime. More importantly, space law and air law are two separate fields of law, essentially with very little interconnection. The course is divided into following units.

Unit - I: Space Law: Historical Background

- Definition and demarcation of outer space
- Space Technology - Benefits
- Shift from air law to space law
- Development of the space law - UN contributions
 - * UN General Assembly Resolutions
 - * Space treaties
 - * Principles - A midway approach

Time allotted: 6 Hours

Reading List:

- A. Sandeepa Bhat B., 'Review of Trends in Outer Space Law-Making', in Sandeepa Bhat B. (ed.), *Outer Space Law: From Theory to Practice*, Hyderabad: Icfai University Press, 2009, pp. 1 - 25.
- B. S. Mishra & T. Pavlasek, 'On the Lack of Physical Bases for Defining a Boundary between Airspace and Outer Space' *Annals of Air and Space Law*, vol. 7, 1982, pp. 399 – 413.
- C. Vladimir Kopal, 'Introduction to United Nations Treaties and Principles on Outer Space', *Proceedings of the United Nations Space Law Workshop on Capacity Building in Space Law*, 2003, pp. 10 – 24.

Unit - II: Fundamental Principles

- Province of all Mankind
- National non-appropriation
- Freedom of exploration, use and scientific investigation
- Common Heritage of Mankind
- Co-operation between the states
- Astronauts - Envoys of Mankind

Time allotted: 8 Hours

Reading List:

- A. Damodar Wadegaonkar, 'The Fundamental Principles of Space Law', in *The Orbit of Space Law*, (London: Stevens & Sons, 1984) pp. 1 - 29.
- B. Johannah Bernstein, *The Global Commons: Key Concepts and Institutions*, 2002.
- C. Gennady M. Danilenko, 'The Concept of the "Common Heritage of Mankind" in International Law', *Annals of Air and Space Law*, vol. XIII, 1988, pp. 247 – 263.

- D. S. Bhat, 'Legal Controls of the Exploration and Use of the Moon and Celestial Bodies', *Indian Journal of International Law*, pp. 33 – 49.
- E. Sandeepa Bhat B.. 'The Concept of Common Heritage of Mankind in the Governance of the Moon - An Insight into Article 11 of the Moon Agreement', *Legal Opus*, Issue 1, January 2007, pp. 92 - 107.

Unit - III: Liability and Registration

- Launching state and Registering state
- Absolute liability and fault liability
- COSMOS 954 - A case study
- State liability / responsibility for private space activities
- Registration and identification

Time allotted: 6 Hours

Reading List:

- A. Stephen Gorove, 'Liability in Space Law: An Overview', *Annals of Air and Space Law*, vol. VIII, 1983, pp. 373 – 379.
- B. Alexander F. Cohen, 'Cosmos 954 and the International Law of Satellite Accidents', *Yale Journal of International Law*, vol. 10, 1984, pp. 78 – 91.
- C. Yoon Lee, 'Registration of Space Objects: ESA Member States' Practice', *Space Policy*, Vol. 22, Issue 1, February 2006, pp. 42 – 51.

Unit - IV: Some Technical Problems

- Question of state sovereignty and claim of property rights
- Human habitation on the moon and other celestial bodies
- Protection of the space environment

- Demilitarization of the outer space
- International Space Station - Inventions in outer space

Time allotted: 10 Hours

Reading List:

- A. Michael J. Listner, 'The Ownership and Exploitation of Outer Space: A Look at Foundational Law and Future Legal Challenges to Current Claims', *Regent Journal of International Law*, vol. 75. <www.lexisnexis.com>
- B. Alan Wasser & Douglas Jobes, 'Space Settlements, Property Rights, and International Law: Could a Lunar Settlement Claim the Lunar Real Estate it needs to Survive?'
- C. Johanna Catena, 'Legal Matters Relating to the "Settlement" of "Outposts" on the Moon', IAC-04-IISL.4.18, *Proceedings of the Colloquium on Law of Outer Space 2004*, pp. 414 – 424.
- D. Sandeepa Bhat B., 'Sustainable Space Development - Need for a Change in the Liability Regime' *Proceedings of the Fiftieth Colloquium on Law of Outer Space*, 2008.
- E. Subrata Roy Chowdhury, 'Outer Space without Arms: Substratum of a Peaceful Regime for Common Benefit', *Asian Year Book of International Law*, pp. 3 – 24.
- F. Luther M. Rangreji, 'Demilitarisation of Outer Space: A Vanishing Point of Jurisprudence', in V.S. Mani, S. Bhat and V. Balakista Reddy (eds), *Recent Trends in International Space Law and Policy*, 1997, pp. 517 – 531.
- G. R. Oosterlinck, 'The Intergovernmental Space Station Agreement and Intellectual Property Rights', *Journal of Space Law*, vol. 17, 1989, pp. 23 - 36.
- H. Alejandro Piera, 'Intellectual Property in Space Activities. An Analysis of the United States Patent Regime', *Air and Space Law*, vol. XXIX, Feb 2004, pp. 42 – 58.

Unit - V: System of Financing Outer Space Activities

- Private space activities
- Asset-Based Financing
- UNIDROIT Convention on International Interests in Mobile Equipment
- Preliminary Draft Protocol on Matters Specific to Space Assets

Time allotted: 6 Hours

Reading List:

- A. Stacey A. Davis, 'Unifying the Final Frontier: Space Industry Financing Reform', *Commercial Law Journal*, Winter 2001. <www.westlaw.com>
- B. Roy Goode, 'The Cape Town Convention on International Interests in Mobile Equipment. A Driving Force for International Asset-Based Financing', *UCC Law Journal*, Fall 2003. <www.westlaw.com>
- C. P. Ishwara Bhat & Sandeepa Bhat B., 'UNIDROIT System of Asset Based Financing for Space Activities - Need to Plug the Loopholes', *Proceedings of the Fiftieth Colloquium on Law of Outer Space*, 2008.
- D. Mark J. Sundahl, 'The "Cape Town Approach": A New Method of Making International Law', *Columbia Journal of Transnational Law*, 2006. <www.westlaw.com>

Unit - VI: National Space Legislation

- Need for national space legislation
- Commerce oriented approach - US & Australian models
- Other approaches - Russian & UK models
- Indian position

Time allotted: 6 Hours

Reading List:

- A. Stephen Gorove, 'The Growth of Domestic Space Law: A U.S. Example', *Journal of Space Law*, vol. 18, 1990, pp. 99 – 111.
- B. Paul B. Larsen, 'Commercial Space Launches', *Proceedings of Space Law Conference*, Thailand, 2006.
- C. Yun Zhao, 'National Space Legislation, with Reference to China's Practice', *Proceedings of Space Law Conference*, Thailand, 2006.

Books for Reference (For all Units)

Compulsory Readings:

- 1 Bin Cheng, *Studies in International Space Law*, Oxford: Clarendon Press, 1997.
- 2 Sandeepa Bhat B. (ed.), *Outer Space Law: From Theory to Practice*, Hyderabad: Icfai University Press, 2009.
- 3 I.H.Ph. Diederiks-Verschoor, *An Introduction to Space Law*, Second revised edition, Kluwer Law International.
- 4 Sa'id Mosteshar (ed), *Research and Inventions in Outer Space - Liability and Intellectual Property Rights*, London: Martinus Nijhoff, 1995.
- 5 Paul B. Larsen, *Space Law*, Ashgate Publications, 2007.

Recommended Readings:

- 1 Kemal Baslar, *The Concept of the Common Heritage of Mankind in International Law*, The Hague: Martinus Nijhoff Publishers, 1998.
- 2 Bhayana, Harnam, *International Law in the Regime of Outer Space*, Calcutta: R. Cambray and Co. Pvt. Ltd., 2001.
- 3 V.S. Mani, S. Bhatt and V. Balakista Reddy (ed), *Recent Trends in International Space Law & Policy*, New Delhi: Lancers Books, 1997.
- 4 Nandasiri Jasentuliyana (ed), *Space Law - Development and Scope*, London: Praeger, 1992.

- 5 Gyula Gal, *Space Law*, Budapest: Akademinai Kiado, 1969.
- 6 Carl Quimby Christol, *Space Law: Past, Present and Future*, The Hague: Kluwer Law International, 1991.

Dr. Sandeepa Bhat B.
(Course Teacher)

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