

Outer Space Law

V Semester (LL.B.) - Elective Course

Introduction:

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. In furtherance of the objective, course would start with the analysis of development of space law and fundamental principles applicable to outer space, and then goes on to look into the legality of some of the recent developments like the claim of sovereignty and property rights over the outer space and celestial bodies, sale or leasing of orbits and spectrums, human habitation in outer space, militarization of outer space, plans to conduct inventions in outer space and increasing private space activities. Apart from the legal developments in the international level, the course would also cover the developments of space law at national level by analyzing the laws passed by some of the space-faring nations. 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.

Course Outline:

The course is divided into following six modules.

Module - 1: Space Law: Historical Background

- 1.1 Definition and demarcation of outer space
- 1.2 Space technology - Benefits
- 1.3 Shift from air law to space law
- 1.4 Development of the space law - UN contributions
 - 1.4.1 UN General Assembly Resolutions
 - 1.4.2 Space treaties
 - 1.4.3 Principles - A midway approach

Time allotted: 6 Hours

Reading List:

- A. Harnam Bhayana, 'Delimitation of Outer Space' (Chapter IV) in *International Law in the Regime of Outer Space*, (Calcutta: R. Cambay and Co. Pvt. Ltd., 2001) pp. 121 - 157.
- B. Sandeepa Bhat B., 'Space Technology and Law: Some Unresolved Questions', *Delhi Law Review*, Vol. XXVIII - XXIX, 2006 - 2007, pp. 231 - 243.
- C. 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.
- D. 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.
- E. 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.

Module - 2: Fundamental Principles

- 2.1 Province of all Mankind
- 2.2 National non-appropriation
- 2.3 Freedom of exploration, use and scientific investigation
- 2.4 Common Heritage of Mankind
- 2.5 Jurisdiction and control
- 2.6 Co-operation between the states
- 2.7 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. The Province of Mankind. (Refer Module)
- 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. 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.
- E. G. S. Sachdeva, 'Astronauts: Envoys of Mankind: An Analysis of Legal Basis', in V.S. Mani, S. Bhat and V. Balakista Reddy (eds), *Recent Trends in International Space Law and Policy*, 1997, pp. 209 - 217.
- F. Johannah Bernstein, *The Global Commons: Key Concepts and Institutions*, 2002.

Module - 3: Liability and Registration

- 3.1 Launching state and Registering state
- 3.2 Liability and responsibility regime under the Outer Space Treaty

- 3.3 Absolute liability and fault liability
- 3.4 COSMOS 954 - A case study
- 3.5 State liability / responsibility for private space activities
- 3.6 Registration and identification

Time allotted: 6 Hours

Reading List:

- A. Sandeepa Bhat B. and P. Ishwara Bhat, 'Legal Framework of State Responsibility and Liability for Private Space Activities', in Sandeepa Bhat B. (ed), *Space Law in the Era of Commercialization* (Lucknow: Eastern Book Company, 2010) pp. 131 - 149.
- 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. Stephen Gorove, 'Liability in Space Law: An Overview', *Annals of Air and Space Law*, vol. VIII, 1983, pp. 373 – 379.
- D. Kay-Uwe Horl and Julian Hermida, 'Change of Ownership, Change of Registry? Which Objects to Register, What Data to be Furnished, When, and Until When?', *Proceedings of the Colloquium on Space Law*.

Module - 4: Some Problems of Current Concern

- 4.1 Question of state sovereignty and claim of property rights
- 4.2 Human habitation on the moon and other celestial bodies
- 4.3 Protection of the space environment
- 4.4 Demilitarization of the outer space
- 4.5 International Space Station - Inventions in outer space

Time allotted: 10 Hours

Reading List:

- A. Jitendra Kumar, 'The Geostationary Satellite Orbit: An Overview of Issues', in V.S Mani, S. Bhat and V. Balakista Reddy (eds), *Recent Trends in International Space Law*, 1997, pp. 291 - 300.
- B. 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.lexisnexus.com>
- C. Alan Wasser & Douglas Jobes, 'Space Settlements, Property Rights, and International Law: Could a Lunar Settlement Claim the Lunar Real Estate it needs to Survive?'
- D. 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.
- E. 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, pp. 319 - 325.
- 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. Shyamala D. and Sandeepa Bhat B., 'China's Anti-Satellite Missile Test: Political and Legal Ramifications', in Sandeepa Bhat B. (ed.), *Outer Space Law: From Theory to Practice*, Hyderabad: Icfai University Press, 2009, pp. 106 – 118.
- H. Sandeepa Bhat B. 'Inventions in Outer Space: Need for Reconsideration of the Patent Regime', *Journal of Space Law*, Vol. 36, 2010, pp. 1 – 17.

Module - 5: System of Financing Outer Space Activities

- 5.1 Increasing private space activities
- 5.2 Asset-Based Financing
- 5.3 UNIDROIT Convention and draft Space Protocol

- 5.4 Creation and registration of international interests in space assets
- 5.5 Default and remedies
- 5.6 Loopholes in the UNIDROIT system

Time allotted: 6 Hours

Reading List:

- A. 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>
- B. 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, pp. 238 - 253.
- C. Mark J. Sundahl, 'The "Cape Town Approach": A New Method of Making International Law', *Columbia Journal of Transnational Law*, 2006. <www.westlaw.com>
- D. Stacey A. Davis, 'Unifying the Final Frontier: Space Industry Financing Reform', *Commercial Law Journal*, Winter 2001. <www.westlaw.com>

Module - 6: National Space Legislation

- 6.1 Need for national space legislation
- 6.2 Commerce oriented approach - US & Australian models
- 6.3 Other approaches - Russian & UK models
- 6.4 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. V. Balakista Reddy, 'Space Law and Space Policy in India', in V.S. Mani, S. Bhat and V. Balakista Reddy (eds), *Recent Trends in International Space Law and Policy*, 1997, pp. 115 – 139.
- D. Yun Zhao, 'National Space Legislation, with Reference to China's Practice', *Proceedings of Space Law Conference*, Thailand, 2006.

Books for Reference (For all Modules)

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 Sandeepa Bhat B. (ed), *Space Law in the Era of Commercialization*, Lucknow: Eastern Book Company, 2010.
- 4 I.H.Ph. Diederiks-Verschoor, *An Introduction to Space Law*, Second revised edition, Kluwer Law International.
- 5 Sa'id Mosteshar (ed), *Research and Inventions in Outer Space - Liability and Intellectual Property Rights*, London: Martinus Nijhoff, 1995.

Recommended Readings:

- 1 Bhayana, Harnam, *International Law in the Regime of Outer Space*, Calcutta: R. Cambray and Co. Pvt. Ltd., 2001.
- 2 V.S. Mani, S. Bhatt and V. Balakista Reddy (ed), *Recent Trends in International Space Law & Policy*, New Delhi: Lancers Books, 1997.
- 3 Nandasiri Jasentuliyana (ed), *Space Law - Development and Scope*, London: Praeger, 1992.
- 4 Paul B. Larsen, *Space Law*, Ashgate Publications, 2007.

Modes of Evaluation

Sl. No.	Evaluation Method	Marks
1.	Presentation of the Project	20
2.	Written Project	25
3.	Class Participation	10
4.	End Semester Examination	45

Dr. Sandeepa Bhat B.
(Course Teacher)