

Lecture Plan
Department of Planning, School of Planning and Architecture, Vijayawada

Name of Course: Waste Management (MPEP315)

Programme & Sem: **Masters of Urban and Regional Planning (PG), Semester Three**
 Course Duration: July 10 to Nov 03, 2017
 Course Coordinator: Shakthe S, Ms., Assistant Prof., Dept. of Planning (shakthecharan@spav.ac.in)
 Number of Credits: 03
 Total Periods/Week: 03 (See Time Table for details)
 Internal Assessment: 50 (minimum pass marks 50%)
 End Evaluation: 50 (minimum pass marks 50%) – Written Exam.
 Total Marks: 100 (to be converted to CGPA credit pattern as per regulations)

Subject Objective: *To understand waste as a by-product of urbanisation, with particular emphasis of hazardous wastes, its treatment and legislative implications.*

Week	Lecture / Session Topic (Teaching-Learning Objective aimed)	Session Mode	References / Suggested Readings
Week 1 (July 10-14)	Basic introduction to waste management, typology of wastes – municipal wastes, domestic wastes, industrial wastes, bio-medical wastes – dry and wet wastes, organic and inorganic wastes.	Lecture	1. John Pichtel. (2014). Waste Management Practices: Municipal, Hazardous and Industrial. CRC Press. Boca Raton (BOOK) 2. Lilliana Abarca Guerrero et. al., 'solid waste management challenges for cities in developing countries'. Waste Management 33 (220–232). Elsevier. 2013. (ARTICLE)
Week 2 (July 17-21)	Characteristics of wastes; generation of wastes - sources and composition, issues related to segregation at household level, standards and rates off generation; collection, transportation and disposal of wastes.	Lecture	3. Global Development Research Centre (GDRC), 'Waste Management Planning: An environmentally sound approach for sustainable Urban Waste Management'. 2016. (ARTICLE)
Week 3 (July 24-28)	Best practices in segregation of waste in Indian context, Draft MSWM rules 2000, 2012, and URDPFI guidelines related to SWM for different categories of towns and cities.	Lecture	4. Kreith F. And Illiyen A. (2012). Solid Waste Management: An Indian Perspective. Synergy Books India. Delhi (BOOK)
Week 4 (July 31-Aug 4)	Concept of industrial wastes, Classification and composition of industrial waste, Industrial wastes as sources of pollution for water, air and soil, Problems related to industrial wastes.	Lecture	5. Centre for Public Policy Research (CPPR), 'Waste Regulation in India: An Overview'. 2010 (ARTICLE)
Week 5 (Aug 7 -11)	Various policies, legislations related to industrial pollution; categorisation of industries as per pollution	Lecture	6. The Energy and Research Institute, 'Waste to Resource: A Waste Management Handbook'. 2014 (REPORT)
Week 6 (Aug 14 - 18)	Internal Assessment - I		
Week 7 (Aug 21 - 25)	Industrial consumption of energy and its relation to waste generation; disposal standards in industries.	Lecture	7. Centre for Public Policy Research (CPPR), 'Waste Regulation in India: An Overview'. 2010 (ARTICLE)

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Week 8 (Aug 28-Sept 1)	Legislative procedures of waste management in industries, industrial estates and corridors.	Lecture	8. The Energy and Research Institute, 'Waste to Resource: A Waste Management Handbook'.
Week 9 (Sept 4)	Field Work – (Sep 2-10)		
Week 10 (Sept 11 - 15)	Concept of bio-medical wastes, Categorisation of bio-medical wastes, process of transport, issues related to bio-medical wastes in Indian cities	Lecture	9. Govt. of India, Ministry of environment, forest and climate change, 'Bio-Medical Waste (Management and Handling) Rules, 2016. (REPORT)
Week 11 (Sept 18 - 22)	Internal Assessment - II		
Week 12 (Sept 25 - 29)	Existing treatment and disposal of medical wastes, generation standards as per beds; Existing rules related to disposal of bio-medical wastes.	Lecture	10. Reema kumara, 'Establishing Bio-medical waste management system in Medical University of India- A Successful practical approach'. Clinical epidemiology and global health. Elsevier.2013. (ARTICLE)
Week 13 (Oct 2 - 6)	Existing disposal mechanism in India, traditional methods and conventional methods of treatment, Different methods of waste treatment and disposal – comparative analysis.	Lecture	11. Jean Bogner., 'Waste management'. Cambridge University press. 2015. (BOOK) 12. Ramesh Chandrappa & Diganta Bhusan Das (2012) 'Solid Waste Management – Principles and Practices', Springer. (BOOK)
Week 14 (Oct 9 - 13)	Requirements of land, expertise, energy and costs related to different methods, best practices related to solid waste management across Indian cities.	Lecture	
Week 15 (Oct 16 - 20)	City sanitation plans in India; Service level benchmarks in waste management.	Lecture	13. Ministry of Urban Development. 'Service Level Benchmarks Data Book – Improving Service Outcomes 2008-09'. Gol. 2010. (GUIDELINES)
Week 16 (Oct 23 - 27)	Internal Assessment - III		
Week 17 (Oct 30 – Nov 3)	Waste to energy as a concept – advantages and disadvantages; earning from wastes; Governance models in waste management.	Lecture	14. Govt. of India, MoUD, 'Compendium of best practices in sanitation and solid waste management'. 2014. (REPORT)

Note:

1. Any other closed holidays as declared by SPAV shall supercede the above lecture plan. Holidays shown above may alter as per Notice from time to time.
2. Assessment Sessions may be re-scheduled, with prior intimation.
3. Reading lists provided is not exhaustive and is subject to addition – students are advised to follow progression of class to keep abreast of the new reading lists, if any.