



School of Planning and Architecture: Vijayawada

(An institution of National Importance under the Ministry of Human Resource Development, Govt. of India)
S.No. 71/1, NH-5, Nidamanuru, Vijayawada – 521 104, Andhra Pradesh, India

Department of Architecture

Course: 10210201; Waste Management

Instructors: Karthik Chadalavada

External Theory I

Contact Periods/ week: 02 Slots each of 50 min. per week

Time Table:

Attendance: Min 75%

Class: I Yr. II Sem. M.Arch, 2017-18 A.Y

Internal Assessment: 50

External Theory Exam: 50

Total Marks: 100

Credits: 2

Min. Passing Marks: 50% each in Internal & External Assessment, 50% in Aggregate

Objective: The primary goal is to provide a comprehensive understanding of waste management from an environmental public health perspective. Identify and discuss the public health, regulatory, planning, technical and economic principles that influence the solid waste management system. Describe appropriate methods to minimize the impact on the public's health from solid waste related activities. Analysis of an integrated solid waste handling system including source reduction, recycling and reuse, composting, land filling and combustion. Develop a more informed opinion on a variety of waste related issues such as electronic waste, industrial waste, medical waste and C&D (construction and demolition) waste etc.

Sustainable techniques in municipal solid waste management and others: Introduction, Segregation, Sorting, Composting, Vermi composting, Home composting, Recycling and Reuse. Incineration method, Scientific Land filling, Energy development and Management of urban waste services.

LECTURE PLAN

S. No.	Week	TOPIC OF CLASS LECTURE & DISCUSSION	CLASS ACTIVITIES & ASSIGNMENTS
1	Week 1	Comprehensive understanding of waste management - Wastes generated by human habitat: solid, liquid and gaseous - Types of wastes: municipal, industrial, post consumer, agricultural, toxic, bio-medical, hazardous, electronic, radioactive etc.	Lecture & Discussion
2	Week 2	Comprehensive understanding of waste management - Municipal waste: Segregation at source, storage, transportation, disposal and processing - Waste management in India: Current scenario, challenges, responses and pitfalls - Waste management in difficult terrains: hilly areas, high rain fall areas, water fronts, etc.,	Lecture & Discussion
3	Week 3	Public health, regulatory, planning, technical and economic principles that influence the solid waste management system - laws / rules governing waste management in India - Financial models for waste management	Lecture & Discussion
4	Week 4	Public health, regulatory, planning, technical and economic principles that influence the solid waste management system - Importance of community participation in waste management - Role of NGOs in effective waste management, sanitation and health	Lecture & Discussion Submission of Internal Assessment-I

5	Week 5	methods to minimize the impact on the public's health - Impact on health and sanitation - Contemporary technologies and infrastructure for waste management - Efficient and effective solid waste management from generation point to final disposal: waste bins, cold rooms, transport mechanisms, landfill sites, incinerators, composting, etc. - Collection system for waste in different types of building structure	Lecture & Discussion
6	Week 6	Integrated solid waste handling system including source reduction, recycling and reuse, composting, land filling and combustion	Lecture & Discussion
7	Week 7	Case examples of integrated solid waste management	Lecture & Discussion
8	Week 8	waste related issues such as - electronic waste, - industrial waste,	Lecture & Discussion
9	Week 9	waste related issues such as - medical waste and - C&D (construction and demolition) waste etc.	Lecture & Discussion
10	Week 10	Sustainable techniques in municipal solid waste management and others: - Segregation, Sorting etc. - Pelletization, Pulping etc. - Composting, Vermi composting, etc.	Lecture & Discussion
11	Week 11	Sustainable techniques in municipal solid waste management and others: - Recycling: Recycling industrial, agricultural and municipal waste - Recycling waste as alternative material for buildings, landscape and other products	Lecture & Discussion Submission of Internal Assessment-II
12	Week 12	Sustainable techniques in municipal solid waste management and others: - Reuse: Study of innovative practices for use of recycled material, specifications and construction methods for using recycled waste	Lecture & Discussion
13	Week 13	Incineration method, Scientific Land filling	Lecture & Discussion
14	Week 14	Energy development and Management of urban waste services: - biological and thermal energy options - Energy from sanitary landfills, - refuse derived fuel and other options	Lecture & Discussion
15	Week 15	Case examples of Energy development and Management of urban waste services	Lecture & Discussion Submission of Internal Assessment-III
16	Week 16	Final Internal Assessment & end of academic session	Lecture & Discussion

Tentative break-up of Internal Assessment Marks:

S.No.	CATEGORIES OF EVALUATION	MARKS
1	Internal Assessment-I	15
2	Internal Assessment-I	15
3	Final Test/Internal Assessment-III	20
	Total	50

Note:

References:

1. Constitutional Law of India – J.N. Pandey 1997 (31st Edition.) Central Law Agency, Allahabad.
2. Administrative Law U.P.D. Kesari 1998. Universal Book Trade, Delhi.
3. Environmental Law H.N. Tiwari, Allahabad Law Agency, 1997.
4. Environmental, A., Divan and Noble M. Environmental Law and Policy in India (cases, Materials and Statutes) 1991 Tripathi, Bombay.
5. Environmental Policy. Forest Policy. Bare Acts – Government Gazette notification.
6. Environmental Laws of India-C.P.R. Environmental Education Centre
7. DEWATS, Auroville.
8. Publications by Vastu Shilpa Foundation, Environmental Sanitation Institute, Ahmedabad.

sd/-
(Karthik.Chadalavada)

Course Instructor:

sd/-
(Krishna Kumar)

Head of the Department: