

International Winter School- Manipal University Jaipur [IWSMUJ]-2023

[Hybrid Mode]



Project Overview

Name of Project- Utilization of Incinerated Biomedical Waste Ash in Pavements

Name of instructor: Dr. Sanchit Anand; Dr. Bhavna Tripathi; Dr. Priyansha Mehra

Session: Jan.-Feb. 2023

Language of instruction: English

Number of contact hours: 36

Credit awarded: 03

Objective of Project

To provide a sustainable solution for the effective use of landfill-dumped incinerated biomedical waste ash in Pavements.

Syllabus

Introduction to Pavements, incinerated biomedical waste ash and other raw materials.

Testing of Incinerated Biomedical Waste Ash and other raw materials

Preparation of mix design for pavement with partial replacement of cement with biomedical waste ash.

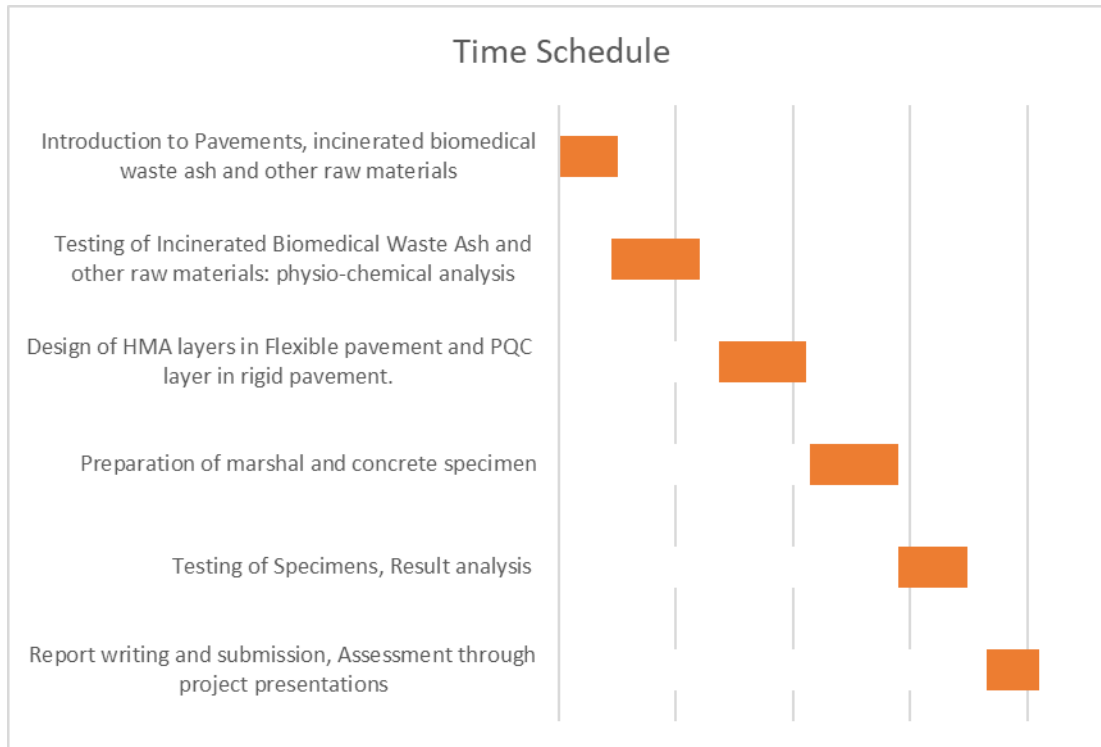
Performance assessment of Hot Mix Asphalt (HMA) and Pavement Quality Concrete.

Organization of Project

Total contact hrs 36		
1 st week	06 hrs	Introduction to Pavements, incinerated biomedical waste ash and other raw materials. (2 Hours Lecture, 4 hours hand on practice)
2 nd week	06 hrs	Testing of Incinerated Biomedical Waste Ash and other raw materials: physio-chemical analysis (2 Hours Lecture, 4 hours hand on practice)
3 rd week	06 hrs	Design of HMA layers in Flexible pavement and PQC layer in rigid pavement. (2 Hours Lecture, 4 hours hand on practice)
4 th week	06 hrs	Preparation of marshal and concrete specimen (2 Hours Lecture, 4 hours hand on practice)
5 th Week	06 hrs	Testing of Specimens, Result analysis
6 th Week	06 hrs	Report writing and submission, Assessment through project presentations

Mode of lectures: Hybrid mode lecture/videos/case study/ discussion/ workshop/ hands-on

Course/Project Plan



Brief profile of the instructor

1. Dr. Sanchit Anand –

Dr. Sanchit Anand is an Assistant Professor (Senior Scale) in the Department of Civil Engineering at Faculty of Engineering, MUJ. He has 8+ years of experience in academics and research in the field of Transportation Engineering, Material Engineering and Urban Transportation.



2. Dr. Bhavna Tripathi –

Dr. Bhavna Tripathi has a rich and versatile experience of over 21 years in industry, teaching, consultancy, and research. She shifted to academics after gaining an industrial exposure of nearly ten years while working as Deputy General Manager at the Consulting Group of Engineers Ltd., Jaipur and as a free-lance consultant for consultancy projects in the area of road safety. With over ten years of teaching and research experience, she has accomplished, administrative responsibilities in different capacities, such as, Deputy Director (Academics) and Coordinator, B. Tech first year at MUJ; Head of Department at VIT- East, Jaipur; and, as Principal Investigator (DST project) at MNIT Jaipur.

Dr Tripathi is actively contributing to professional societies, various state, and national level committees. She is a technical committee member in the Subcommittee on Campus Facilities and Accommodation Services, SSD 04:3, Bureau of Indian Standards and member of Road Safety Committee constituted by the Commissioner of Police Jaipur, since July 2017. Formerly, she was Treasurer, Indian Concrete Institute – Rajasthan State Centre (ICI-RSC), from December 2018 to October 2021; member of the Executive Committee, ICI-RSC from July 2015 to December 2018; and member of Road Safety Forum, Transport Department Jaipur from 2008 to 2010. She has also served as member of Women Cell at MNIT Jaipur and Vivekananda Institute of Technology – East, Jaipur.

As a researcher, she is interested in sustainable construction materials, concrete durability, construction and demolition waste, alternative binders, and road safety. She has many publications, both in SCI journals and international conferences, and has edited proceedings of an international conference. She has research projects funded by Ministry of Mines and DST, New Delhi. She has established Rajasthan's first Technology Development & Training Centre in MUJ, which is funded by DST Rajasthan. She has active collaborations with researchers from renowned international universities such as Czech Technical University in Prague, Lund University in Sweden, and KU Leuven in Belgium.



3. Dr. Priyansha Mehra –

Dr. Priyansha Mehra is an Associate Professor in the Department of Civil Engineering at Faculty of Engineering, MUJ. She has 8+ years of experience in academics and research in the field of Concrete Technology and Waste Management.

