
Registration Seminar

Seminar Title	: Utilization of mining, municipal and other industrial wastes in sustainable civil and mining constructions
Speaker	: Poulami Konar (Rollno : 522mn1003)
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Venue	: Seminar Room, (R. N. 208, 1st Floor) Mining Engineering Department
Date and Time	: 17 Dec 2024 (4:30 pm)
Abstract	: Solid waste management is one of the most significant environmental problems our country is currently experiencing. Conventional waste disposal techniques, like backfills, landfills, and storage facilities, are frequently unsustainable and present serious environmental hazards. A lot of attention has been paid in the last ten years to the quest for sustainable and affordable non-traditional building materials made from municipal and industrial waste for the construction of pavements, roads and other civil and mining applications. There are two advantages to using mining waste for construction: it preserves natural resources and lessens the negative effects of mining on the environment. There is a significant lack of particular laws and the use of mining wastes in road construction has not yet been established on a broad scale. A more sustainable future depends on reducing the extraction of natural resources, which is why this research project will look for substitute materials for large-scale material-intensive construction and infrastructure projects. This study aims to investigate how industrial and municipal wastes work together to replace traditional construction materials and using waste composites made from these wastes, a sustainable and cost-effective method is created to enhance the waste utilisation in the construction industry. The goal of the initial part of the research work to provide ways for mechanically changing in-situ materials and construction procedures to reduce construction time and expense, as well as to better understand how industrial and municipal wastes work together to stabilize each of the unstable pavement layers. Detailed laboratory investigation will conduct to show the usage of waste composites in sub-grade, unbound base, sub-base and surface layers of pavements in the form of coarse aggregates, fine aggregates, mineral filler, binders and surface coat materials as per Indian standards. Utilization of waste composites and natural aggregates in each layers provide an economical, efficient and sustainable construction technique for a pavement design without compromising the strength and durability characteristics of pavement.