MINING ENVIRONMENT CONTROL

Code	CreditHours
MinE-830	3

CourseDescription

Introduction, Impacts of mining activities, air quality issues, air quality behavior, dust control, Quantitative emission inventories, Control technologies for fugitive dust, Measurement and monitoring, management, legislation, computer modelling

TextBook:

1. Jerrold J. M. "Effects of Mining on the Environment and American Environmental Controls on Mining" ISBN- 978-1-78326-412-4.

ReferenceBook:

1. Jose M. A. "Environmental Impacts of Mining Activities" ISBN 978-3-642-59891-3.
2. Ravi. J. "Environmental Impact of Mining and Mineral Processing" ISBN 9780128040409.
3. Spitz, K and Trudinger, J, 2009. Mining and the Environment – from Ore to Metal, Taylor and Francis, UK, ISBN 978-0-515-46510-6.

Prerequisites

Nil

ASSESSMENTSYSTEMFORTHEORY

Quizzes	10%
Assignments	10%
MidTerms	30%
ESE	50%

TeachingPlan

Week No	Topics	LearningOutcomes
1	Introduction	CourseOutline,objectives,teachingplan,assessmentmethod, conceptsreview. Theory and concepts relevant to mining and its impacts on the biophysical environment
2-3	Impact of Mining activities	Impacts of various mining activities on water; air quality; biodiversity /ecosystem services and local communities
4	Air quality issues	Contemporary local and global air quality issues.
5-6	Air quality behavior	Connections between surface mining and large civil engineering projects and air quality behavior of airborne

		particles and the generation of windblown dust.
7-8	Dust control	The planning parameters to control dust. Quantitative emission inventories, Control technologies for fugitive dust
9	**MID TERM EXAM**	
10	Measurement and monitoring	Measurement principles and available instrumentation, Monitoring strategy
11	Management	Management systems for environmental control and environmental auditing
12	Legislation	The requirements of legislation; international guidelines and best practices for managing and mitigating the various impacts of mining
13-17	Computer Modelling	Computer based modelling and practices
18	**END SEMESTER EXAM**	