

# MIME 322. FRAGMENTATION AND COMMUNUTION.

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Credits: 3

Offered by: Mining & Materials Engineering (Faculty of Engineering)

Terms offered: Winter 2026

[View offerings for Winter 2026 in Visual Schedule Builder.](#)

## Description

Principles of drilling, penetration rates, and factors affecting the choice of drilling method. Characteristics of explosives, firing systems and blast patterns. Blasting techniques in surface and underground workings. Special blasting techniques at excavation perimeters. Vibration and noise control. Mechanical and continuous approaches to fragmentation, including longwall shearing and fullface boring. Economics of drill/blast practice, interface with transport and crushing systems, drivers for mine-to-mill integration including energy considerations. Modelling of fragment and particle size distributions; comminution as a transfer function. Comminution technology: crushing, grinding, size classification. Integrated analysis of fragmentation and comminution operations.

- Prerequisites : MIME 209 or MECH 262 or CIVE 302 or CHEE 231 or ECSE 205
- Corequisites: MIME 341
- (3-3-3).

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