

Department: Mining Engineering

Division: Mining Exploitation and Rock Mechanics

Level and Major: BSc, Mining Exploitation and Rock Mechanics

Course Title: Strength of Materials 1

Number of Credits: 3

Prerequisite: Statics

Lecturer: Dr. Saeid Nikoosokhan

Course Goals and Objectives

The purpose of this course is to enable students to understand the fundamental issues of solid mechanics and its application in mining engineering.

Course Topics

- Calculate the reaction in the supports and define the stress and strain
- Hooke's Law
- Poisson's coefficient
- Static definite and indefinite systems
- The basic theory of bending in beams and determination of slope and shift of beams
- Thin wall tanks
- Moore's circle to determine stresses