Course Description

Overview of topics on the stone and aggregate industry, including surface and underground operations, plant equipment, economics, marketing, transportation and environmental topics.

Course Interactions

The lectures will include mostly PowerPoint presentations, Microsoft Word and/or pdf documents, they will be posted on BLACKBOARD, a course administration software package used at MST. No special skills or sophisticated software are required to use this package. The access is by password that will be assigned to all students. There will be also extensive use of other means of communications to facilitate interactions (e-mail, telephone, fax).

Hardware/Software

An access to a reasonably fast computer with a later version of MS Explorer, Netscape Navigator (or other browsers), Microsoft Office, Acrobat Reader, and a CD drive is necessary for this course. The system needs a connection to the Internet — although a dial up at 56 kbps will carry you through, cable modem or DSL are recommended. You also need to have access to a scanner, if not, fax.

Textbook


Select readings from SME Mining Engineering Handbook, various quarrying and industrial minerals magazine, and other relevant handout materials will be provided as appropriate.

Homework Assignment and Term Project

Between four and six homework will be assignment plus a term paper. All assignments are to be prepared in Microsoft Word and/or PowerPoint.
For term paper, the students are to choose a topic themselves that is relevant to the course; however, some topics may require approval from employer. The intent of this assignment is to make it a meaningful/useful exercise.

4. **Course Topics** (Tentative)
   1. Overview of Stone Industry – end use of stone products, markets and economics, major stone and aggregate producers, present and future
   2. Stone and Aggregate Requirements – review ASTM specifications, quality control
   3. Geology and Occurrence – location and deposit distribution
   4. Surface Operations – pit layout, drilling/blasting/loading/hauling, design factors
   5. Underground Operations – underground layout, ground control, ventilation, equipment, design factors
   6. Dimension Stone – geology, locations and economics, equipment used
   7. Stone and Aggregate Processing – crushing, screening, stockpiling, and other factors
   8. Plant and Equipment Maintenance
   9. Transportation – in-pit and highway trucks, conveyor belt, rail, barges
   10. Use of Aggflow
   11. Economics of the Stone Industry – special
   12. Environmental Issues – reclamation, dust, noise, vibration, truck traffic, zoning/permitting
   13. Health and Safety Issues

5. **Grades**

   Homework (four to six) 50%
   Term Paper 20%
   Two Examinations 30%

   A  ≥ 90
   B  80 – 89.9
   C  70 – 79.9
   D  60 – 69.9
   F  < 60