

CE 545 - Rock Mechanics I		Fall 2017
Text:	Goodman, Richard E, <u>An introduction to Rock Mechanics, Latest Edition</u> , John Wiley and Sons, ISBN: 0-471-81200-5 and class notes provided by instructor in the form of handouts, as required, from time to time, in class as well as through email.	
Instructor:	Dr. Joseph J. Lifrieri, Ph.D., P.E., Phone 908-400-6968 email: jlifrieri@lifriericonsulting.com	

Prerequisites: approved undergraduate course in soil mechanics within last five years or permission of instructor.

Week	Topic
1	Introduction and Overview
2	Review of Geology
3	Rock Exploration, Structural Geology Concepts Using Maps And Stereographic Methods
4	Joints, Faults, Fractures and Discontinuity Mapping
5	Principles Of Design In Rock Mechanics
6	Rock Classification Systems
7	Quantitative Description of Discontinuities in Rock Masses
8	Midterm Exam
9	Spring Break
10	Stereonet
11	Graphical Presentation of Geological Data
12	Applications of Stereonets in Rock Mechanics
13	Rock Slope Stability, Plane Failure Mode and Wedge Failure Mode Part I
14	Rock Slope Stability, Wedge Failure Modes Part II and Toppling
15	Reading Day
16	Final Exam

Policies

1. The NJIT Honor Code will be upheld and any violations will be brought to the immediate attention of the Dean of Students.
2. Students will be consulted with by the instructor to any modifications or deviations from the syllabus throughout the course of the semester.
3. Make sure that your email address stated in Sakai is correct or provide your preferred email. From time to time, you may be receiving emails. You are expected to see your email at least once daily.
4. Always bring your textbook, a calculator, and writing paper in the class. Please, keep all your work until you have received your final grade.
5. Please keep a copy of your homework after submitting it, since it may not always be possible for the instructor to return the corrected homework back in time for you to study for exams.
6. Use quad paper for homework.
7. All work sheets *must* be stapled on the upper left corner.

8. All work must be done neatly in a professional manner.
9. No makeup Examination will be given.
10. All Examinations have both open book and closed book parts.
11. Switch off Laptops and Cell Phones during Class.
12. Bring your own stationery for examinations.
13. No Laptops, E books or cell phones during examinations.
14. Attendance is mandatory.

Course Content: *Rock Mechanics including geological aspects, mechanical properties, testing and in-situ measurements of rock properties and a brief introduction to the design of rock slopes.*

Basis for Grading

Midterm	35 points
Final	40 points
Class Participation and Attendance	10 points
Homework	15 points
Total	100 points