

Hofstra University - Geology Department

Fall 2006 Semester - Freshman Seminar

CSI: Forensic Geology: Geol 014F – 91/L (94531)

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3 cr.: 2 hrs lecture per week (Mon. 12:50: 2:40 PM – Rm: 308 Starr Hall)

2 hrs lab per week (Wed. 4:10 – 6:00 PM – Rm: 215 Gittleson Hall)

Text Book: Evidence from the Earth by Raymond C. Murray

Published by Mountain Press Publishing Company, Missoula, Montana

Lab Book: Forensic Geology: Laboratory Manual: by C. E. Nehru

(Exercises distributed in the laboratory class)

Course Outline (web enhanced)

The following topics (including the mid-term examination) will be covered in fourteen weeks. Final exam will be during the fifteenth week.

1. Introduction and definitions: relationship between geology and forensic science.
2. Historical account of the development of the subject.
3. Evidence from Earth Materials including Soils: The Geological perspective; minerals, igneous, sedimentary, and metamorphic rocks; varieties of soils.
4. Artificial and commercial materials; cement, concrete and other man-made materials such as plastics.
5. Origin and distribution of Earth Materials and Soils; locations and extent of the materials around the earth.
6. Extra-Terrestrial Materials and their use in forensic investigations: meteorites, tektites, and moon rocks.
7. Deformation and tectonics of earth materials; internal structure of earth; evolution of continents and ocean basins; earthquakes; plate tectonics.
8. Collection and Examination of Earth Materials and Soils; methods to be followed.
9. Instrumentation used in analyzing geological samples; physical, microscopic, and instrumental chemical methods.
10. Geophysical methods used in Forensic science.
11. Practical examples from the literature and personal experience.
12. Student discussions of examples of Forensic cases.
13. Conclusion: The future of Geo-forensic Science.

Term grade for the course is based on lecture and lab exams, assignments, class participation, and presentations.