GEOS 2410-001/003 - GEMSTONES, Fall 2005
Course Outline

Date	Topic
08/18	Introduction; Video tape.
08/23; 08/25	Definitions, Origins, Geology and mining. Host rocks.
08/30; 09/01	Properties of Gemstones; Crystallography
09/06; 09/08	Optical microscope; Refractometer, etc.
09/13; 09/15	Enhancements, Substitutes (synthetics and simulants), Cutting, shaping and polishing; Evaluation, cleaning and care of gems and gemstones
09/20; 09/22	Faceding demonstration; Diamonds
09/27; 09/29	Diamonds; Corundums
10/04; 10/06	Beryls; Topazes
10/11; 10/13	Apatite, Cordierite (Iolite), Zoisites; **Mid-term**
10/18; 10/20	Garnets; Tourmalines
10/25; 10/27	Chrysoberyls, Quartzes, Zircons; Opals
11/01; 11/03	Peridot, Spinels, Spodumenes; Andalusite, Scapolite; Feldspars
11/08; 11/10	Azurite-Malachite, Chryscolla, Turquoise; Lapis Lazuli, jade
11/15; 11/17	Odds'n Ends; Field Trip
11/22; 11/24	Review; Thanksgiving Holiday
11/29	**FINAL** Exam

Grading Procedure

Pop tests (6 minimum)	30%
Mid-term	20%
Final	50%

Instructor: Dr. James L. Carter (FO 2.218A; 972-883-2455; jcarter@utdallas.edu
Office Hours: 10:30 a.m. to 10:55 a.m. and by appointment
TA: Randy Griffin (FO 2.804)
Texts: Simon & Schuster's Guide to Gems and Precious Stones; Handouts; Readings
Lecture/Lab Room: FO 2.604
Lecture/Lab Time: Tuesday/Thursday - 11:00 a.m. to 1:45 p.m.
Pre-requisites: None

This course focuses on some important minerals, mineraloids, and rocks used as gems and discusses their characteristics and properties, crystallography, history, lore, intrigue, geological settings, mining, synthetics, simulants, and cleaning and care. Gems will be studied with various instruments including optical microscope and refractometer.