GEOL 1133
Geology of Gems and Precious Metals

Instructor: David London, Stubbeman-Drace Presidential Professor and Norman R. Gelpman Professor of Geology
2010 Fall Term, Tuesday-Thursday, 1:30-2:45 PM
Room A235 Sarkeys Energy Center

GEOL 1133, formerly taught as *Gold, Silver, and Gemstones* in the evening, is *back in prime time (Tuesday-Thursday afternoons)* as the same course but under the new name. The name coincides with a book on the subject that I am writing for this course, as there is no other textbook on the subject.

There is no more powerful social agent than wealth, and there is no more potent manifestation of wealth than gems and precious metals. These have been the traditional symbols of power and prestige from the earliest recorded history of mankind. Conquests have been waged, societies enslaved, and foreign policies dictated by the distribution of such mineral wealth in relation to national or territorial boundaries.

This course, which was approved as a General Education Core Area II listing in 1989, continues as before: to educate students on the properties of gemstones and precious metals (what makes them special) and on the geologic factors that control their distribution in Nature (i.e., what natural processes or principles cause them to be rare). It includes a presentation of known gems and precious metal deposits and the key factors in exploration for these commodities.

The course includes an emphasis on the geology and properties of natural and synthetic fashioned diamond. There is likely nothing that any person will buy in their lifetime that possesses more value per gram or per volume than a diamond. The selection of a diamond can understandably create anxiety for buyers. I took the Graduate Gemologist diamond grading class of the Gemological Institute of America in 1997 to enhance my instruction about the properties and selection of a faceted diamond. I teach my students what they need to know in order to select a diamond and a diamond seller with confidence.

D. London discovered this gem pocket containing tourmaline and topaz near Ramona, CA (1991).

This ring by M. Novaga features a natural-color *londonite* of 1.18 ct. Photo by R. Appiani. David and Elizabeth London Collection.