

## **Gonzaga-in-Florence - Summer 2009**

CHEM 180: Chemistry in Art (3 credits)

Professor Gemma D'Ambruoso

### **COURSE DESCRIPTION**

This course is designed for non-science majors and will begin with an introduction to some basic principles of light, color, and chemistry. These principles will be used to investigate artists' materials including pigments, dyes, lakes, binders, solvents, varnishes, and native metals used during the Italian Renaissance. Following this introduction, causes of deterioration will be explored. Scientific methods to analyze works of art including microscopic analysis and techniques using x-rays, ultraviolet, and infrared light will be introduced. Finally, conservation and restoration topics will be addressed with particular focus on paintings in Florence. Field trips to art galleries, museums and restoration laboratories are planned as part of this course.

### **REQUIRED TEXTS**

1. "Science for Conservators: An Introduction to Materials", Conservation Unit of the Museums & Galleries Commission, Routledge, New York, 2003. (ISBN 0-415-07165-8)
2. "Science for Conservators: Cleaning", Conservation Unit of the Museums & Galleries Commission, Routledge, New York, 2005. (ISBN 0-415-07165-8)

### **TENTATIVE SCHEDULE**

Week 1:	Properties of light and color
Week 2:	Beginning chemistry
Week 3:	Materials used by Italian artists between 1300 and 1700
Week 4:	Methods used to analyze works of art
Week 5:	Techniques used for cleaning works of art
Week 6:	Case studies of art restorations

### **TENATATIVE ASSIGNMENTS AND GRADING SCHEME**

Class assignments (10%)  
In-class exams (45%)  
Writing assignments (25%)  
In-class presentation (10%)  
Participation in field trips (10%)