

A special topics 3-credit hour course offered by the Department of Physics  
(PHYS 575-769)

# APPLIED COMPOSITES AND NANOCOMPOSITES I

## Course Description:

Introduction to: polymers, polymer matrix composites, ceramic matrix composites, metal matrix composites, nanocomposites, and bio-nanocomposites. Fabrication and development of composites and nanocomposites. Review of experimental techniques including DSC, TGA, DMA, TMA, FTIR, and mechanical (flexural, compressive and tensile) for composite and nanocomposite evaluations.

## Relevant Information

This course is suitable for graduate and undergraduate {with a waiver from the Graduate School (see Dr. Migone)} students who are interested in pursuing their research in material science and applied physics, especially applied research. Because this course covers a wide spectrum of topics from polymers to nanocomposites, there is no standard textbook available which can do justice to all the topics to be covered in the class. Therefore, reference books for this course will be suggested.

Instructor: Prof. Vik Malhotra (any questions: send e-mail: [vmalhotra@physics.siu.edu](mailto:vmalhotra@physics.siu.edu))

Credit Hours: Enroll for 3 credit hours in Physics 575-769

Semester: Spring, 2007

Class Time: To be determined during 1<sup>st</sup> week of class

Class Web Site: [www.physics.siu.edu/malhotra/courses-new.htm](http://www.physics.siu.edu/malhotra/courses-new.htm)