

**San Jose State University
College of Engineering
Materials Engineering Department**

Course:	Mat.E. 232, Ion Beam Processing of Materials
Website:	www.geocities.com/mate232
Course Code:	62089, 3 Units, Fall 2003
Lectures:	Tuesdays, 19:00 - 20:00
Instructor:	Steven Shannon
Office:	By Appointment (Instructor is currently homeless) and before class Phone: W 408-584-0362 H 650-401-7380 M 650-814-0445 Email: W steve_shannon@amat.com H skatersaurus@excite.com
Description:	This course will cover the basic principles behind the interaction between ion beams and solid materials. The principles of binary collisions will be introduced, followed by a study of ion propagation through a material. Material effects and manufacturing applications will then be covered. Additional material, based on the interests of the students, may include ion beam generation, ion beam systems, and alternative ion generating devices such as plasma immersed ion implantation
Objective:	It is the intention of this class to provide the student with a working knowledge of ion beam / material interactions and how these interactions modify materials for engineering purposes.
Assignments:	Weekly reading assignments and homework sets. Homework will be a combination of material covered in class and material that will require preparation for the next class
Grading:	Homework - 40%, Midterm - 30%, Final - 30%
Required Text:	COURSEPACK – Available at the Spartan Bookstore in the student union - Nastasi M., Mayer J., Hirvonen J.; Ion-Solid Interactions: Fundamentals and Applications ; Cambridge University Press; New York; January, 1992