

ME 762
PHASE TRANSFORMATIONS IN SOLIDS
SPRING 2006

Instructor: Dr. R. Srinivasan Telephone: 775-5093 or 775-5040
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Office Hours: M W 2:00 – 3:00 pm

Time/Room: MW 4:10 – 5:50 RC 406

Text Books: *Lectures on the Theory of Phase Transformations*, ed. H.I. Aaronson - 2nd Edition

Phase Transformations in Metals and Alloys, D.A. Porter and K.E. Easterling, Chapman and Hall, London, 1992.

References: Several published papers will be discussed during the quarter. These will be available in the library or through interlibrary loan.

Grading:

Mid-term Exam	30%
Final Exam	30%
Term Paper/Seminar/Project	40%

Topics:

Nucleation
 Homogeneous
 Heterogeneous
Growth
 Diffusion Controlled
 Interface Controlled
Precipitation
Spinodal Decomposition
Eutectoid Reactions
TTT Curves

These topics are covered in Chapters 1, 2 and 3 in Aaronson's book, Chapters 1, 3, 4 and 5 in Porter and Easterling's book, and in papers, which will be discussed during the quarter. Time permitting, additional topics will be covered.

Attendance

Lecture attendance is strongly recommended, but not required. Tests missed due to a valid excuse (illness, work related travel, family emergency, etc.) may be made up.