

MECE 6364 Phase Transformations

Required Textbook: Course materials in ppt format posted in Blackboard Learn

Recommended Reading: Self-study materials will be available on the web or in handouts, as described in lecture topics. In addition, students are encouraged (but not required) to read selected chapters of recommended reading books, as suggested during the class hours. Following is a list of recommended reading books:

- D. A. Porter and K. E. Easterling, "Phase Transformations in Metals and Alloys" (primary)

Grading Policy:

Exams	80%
Homework assignments and take-home exam	10%
Attendance	10%

Course Topics:

- Thermodynamic equilibrium
 - Thermodynamics
 - Phase diagram
- Primer
 - Diffusion
 - Interfaces
- Solid-liquid transformations
 - Solidification
- Solid-solid transformations
 - Diffusional transformations
 - Diffusionless transformations (Martensite transformations)

Additional Statements:

Syllabus is subject to change.