# TEACHING LEARNING MATERIAL

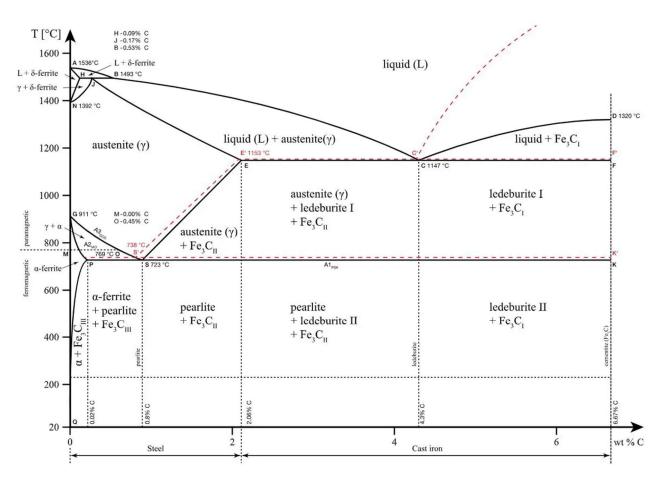


**BRANCH: MECHANICAL ENGINEERING** 

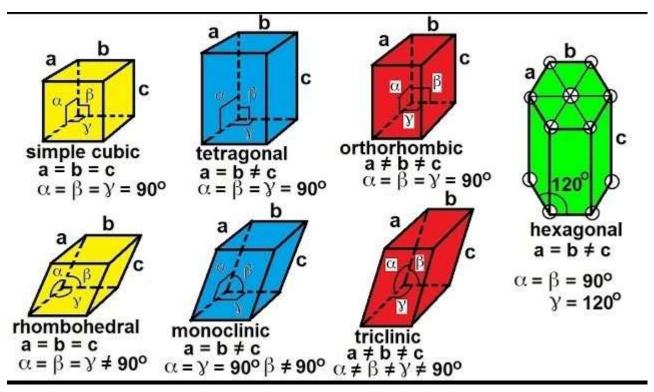
**SEMESTER: 3RD SEMESTER** 

**SUBJECT: ENGINEERING MATERIAL** 

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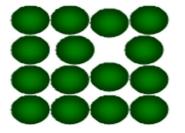


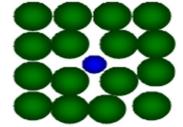
#### **IRON-CARBON PHASE DIAGRAM**

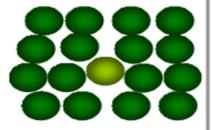


**TYPES OF 7 CRYSTAL SYSTEMS** 

#### Point defects of crystals



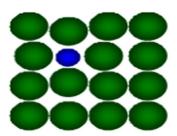


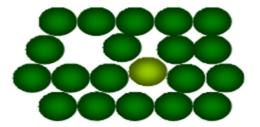


Vacancy

Interstitial impurity

Self-interstitial



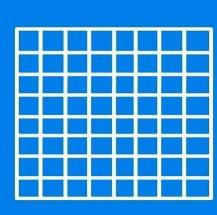


Substitution impurity

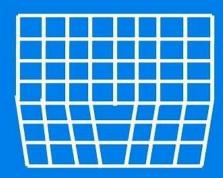
Frenkel defect

### **POINT DEFECTS OF CRYSTALS**

## **Line Defects**







**Edge dislocation** 

**LINE DEFECTS OF CRYSTALS**