



Course code Course title
METRO 002 Aluminium and magnesium foundry alloys

Course summary

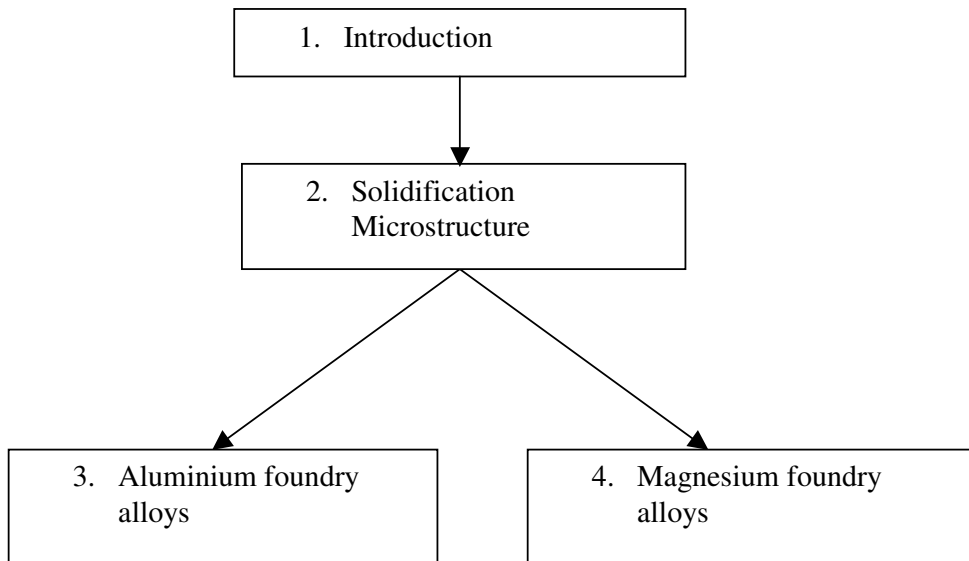
The course aims at:

- Understanding factors important for foundry alloys
 - Freezing temperature, freezing range
- Understanding casting defects – influence of alloy
 - Feeding – porosity
 - Fluidity
 - Hot tearing
 - Segregation
- Understanding solidification of Al and Mg foundry alloys
 - Relation to phase diagram
 - Microstructures
- Understanding properties of foundry alloys
 - Mechanical, corrosion
 - Heat treatment

Lectures list

| n. | Title | Summary | Lecturer | Duration |
|----|-------------------------------|--|-----------------|---------------|
| 1 | Introduction | Casting processes and casting defects | Arnberg Lars | 51' |
| 2. | Solidification microstructure | Development of microstructure during solidification in relation to phase diagram | Arnberg Lars | 38' |
| 3. | Aluminium foundry alloys | Different commercial alloy types. Solidification, microstructures, properties | Arnberg Lars | 39' |
| 4. | Magnesium foundry alloys | Different commercial alloy types. Solidification, microstructure, properties. | Arnberg Lars | 22' |
| | | | | 2h 30' |

Lectures prerequisites chart



Each arrow means a prerequisite.