



Live Training Sessions with Thermo-Calc Software

Organised By

**Department of Metallurgical & Materials Engineering, IIT
Roorkee**

Conducted by

Professor K.C. Hari Kumar, Metallurgical & Materials Engineering, IIT Madras

In collaboration with

Thermo-Calc Software AB, Sweden

Date: 21—25 November , 2022

Time: 10:00 to 12-00 & 3:00 to
5:00 PM

Requirements

- Thermodynamics basic with knowledge of physical metallurgy
- Software and Databases will be provided to the participants.

Outcomes

- You will learn how to use Thermo-Calc in GUI mode, Console mode ,DICTRA and TC-Prisma basic usage how to use.
- Examples will cover applications to steels, aluminium alloys, superalloys, HEAs, ceramics, etc.



Day 1

- Introduction to Thermo-Calc and databases
- Binary phase diagram calculations
- Point calculations at fixed temperature and composition

Day 2

- Ternary isothermal sections
- Ternary isopleths
- Phase diagrams of multicomponent systems

Day 3

- Calculation of Gibbs energy curves
- Calculations of enthalpies, activities, etc.
- Calculation of user defined properties

Day 4

- Quasibinary systems
- Solidification simulation by Scheil model and lever rule
- Chemical equilibrium calculations

Day 5

- How to Use DICTRA , TC-Prisma with basic examples
- Revision & Interactions