ANNOUNCEMENT WS 2011/2012

ELEMENTS OF MICROSTRUCTURE

Location and Time: IA1/21 Monday 15:00-17:00

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This course is an introduction to the microstructures of engineering materials. It is targeted towards students of the Master's Course "Materials Science and Simulation" but is also open to all other students, postdocs and guests who are interested in the basic principles underlying materials microstructures and methods for their analysis. All lectures and course materials will be in English. For further information, please contact: Victoria Yardley (RUB IA1/31 victoria.yardley@rub.de) or Philipp Nörtershäuser (RUB IA1/45 philipp.noertershaeuser@rub.de).

Schedule

(1) 17 Oct 2011  Introduction: from atoms to aircraft
(2) 24 Oct    Atomic structure of materials 1
           31 Oct    No lecture
(3) 7 Nov     Atomic structure of materials 2
(4) 14 Nov    Exercise 1
(5) 21 Nov    Phases and phase diagrams
(6) 28 Nov    Point defects and diffusion
(7) 5 Dec     Solidification, nucleation and growth
(8) 12 Dec    Diffusionless transformations
(9) 19 Dec    Exercise 2
           26, Dec, 2 Jan No lecture
(10) 9 Jan 2012 Dislocations and deformation
(11) 16 Jan   Surfaces and interfaces
(12) 23 Jan   Materials processing
(13) 30 Jan   Microstructural characterisation
(14) 6 Feb    Exercise 3