

Cluster J

75 topics < 107 hours >

prerequisites in other clusters linked
to topic here: 23successors in other cluster linked to
topic here: 15[Previous](#)prerequisites/successors pairs in this
cluster 103[Next](#)[Up to Index Page](#)Prerequisite Topic ⇒ Successor
Topic

cad/cam < 2.0 hr >	⇒	computer controlled machining < 1.0 hr >
cad/cam < 2.0 hr >	⇒	design for manufacture < 3.0 hr >
cad/cam < 2.0 hr >	⇒	design layout < 1.0 hr >
cad/cam < 2.0 hr >	⇒	graphics for me design < 0.5 hr >
cad/cam < 2.0 hr >	⇒	sectional & detail views < 1.0 hr >
cad/cam < 2.0 hr >	⇒	shop practices < 0.5 hr >
ceramics < 2.0 hr >	⇒	material selection < 4.0 hr >
ceramics < 2.0 hr >	⇒	multifunctional materials < 1.0 hr >
composites < 3.0 hr >	⇒	manufacturing properties of nonmetallic materials < 3.0 hr >
crystalline materials < 3.0 hr >	⇒	ceramics < 2.0 hr >
crystalline materials < 3.0 hr >	⇒	defects < 1.0 hr >
crystalline materials < 3.0 hr >	⇒	dislocation < 1.0 hr >
crystalline materials < 3.0 hr >	⇒	imperfections in crystals < 1.0 hr >
crystalline materials < 3.0 hr >	⇒	linear elastic fracture mechanics < 1.0 hr >
cyclic fatigue < 1.0 hr >	⇒	design for fatigue strength < 1.0 hr >
defects < 1.0 hr >	⇒	molecular properties of materials < 2.0 hr >
design for assembly < 1.0 hr >	⇒	design for reliability < 2.0 hr >
design for assembly < 1.0 hr >	⇒	design layout < 1.0 hr >
design for assembly < 1.0 hr >	⇒	product architecture < 1.0 hr >
design for environment < 1.0 hr >	⇒	design for safety < 2.0 hr >

design for fatigue strength < 1.0 hr >	⇒	design for reliability < 2.0 hr >
design for fatigue strength < 1.0 hr >	⇒	design for strength < 1.0 hr >
design for fatigue strength < 1.0 hr >	⇒	design of machines & machine elements < 2.0 hr >
design for human use < 1.0 hr >	⇒	design for manufacture < 3.0 hr >
design for human use < 1.0 hr >	⇒	reliability in design < 1.0 hr >
design for manufacture < 3.0 hr >	⇒	design for reliability < 2.0 hr >
design for manufacture < 3.0 hr >	⇒	design of machines & machine elements < 2.0 hr >
design for reliability < 2.0 hr >	⇒	design for safety < 2.0 hr >
elastic properties of metals & ceramics < 2.0 hr >	⇒	elastic design < 1.0 hr >
elastic properties of metals & ceramics < 2.0 hr >	⇒	elasticity of composite materials < 1.0 hr >
elastic properties of metals & ceramics < 2.0 hr >	⇒	injection molding < 0.5 hr >
elastic properties of metals & ceramics < 2.0 hr >	⇒	linear elastic fracture mechanics < 1.0 hr >
elastic properties of metals & ceramics < 2.0 hr >	⇒	multifunctional materials < 1.0 hr >
elasticity of composite materials < 1.0 hr >	⇒	elastic plastic behavior < 1.0 hr >
engineering materials overview < 1.0 hr >	⇒	composites < 3.0 hr >
engineering materials overview < 1.0 hr >	⇒	materials, structure of engineering < 5.0 hr >
engineering materials overview < 1.0 hr >	⇒	polymers < 1.0 hr >
environmental impact of chemical processes < 0.5 hr >	⇒	industrial ecology < 0.5 hr >
fabrication processes < 3.0 hr >	⇒	design for assembly < 1.0 hr >
failure theories < 2.0 hr >	⇒	design for strength < 1.0 hr >
fatigue < 2.0 hr >	⇒	design for human use < 1.0 hr >
fatigue < 2.0 hr >	⇒	design for manufacture < 3.0 hr >
fatigue < 2.0 hr >	⇒	failure theories < 2.0 hr >
fatigue < 2.0 hr >	⇒	manufacturing properties of metals < 3.0 hr >
fatigue < 2.0 hr >	⇒	metal cutting < 0.5 hr >
fatigue < 2.0 hr >	⇒	reliability in design < 1.0 hr >

fits & tolerances < 2.0 hr >	⇒	precision engineering < 2.0 hr >
fits & tolerances < 2.0 hr >	⇒	shop practices < 0.5 hr >
industrial ecology < 0.5 hr >	⇒	design for environment < 1.0 hr >
injection molding < 0.5 hr >	⇒	manufacturing properties of metals < 3.0 hr >
manufacturing processes < 3.0 hr >	⇒	grinding < 0.5 hr >
manufacturing processes < 3.0 hr >	⇒	manufacturing systems < 3.0 hr >
manufacturing processes < 3.0 hr >	⇒	material selection < 4.0 hr >
manufacturing properties of metals < 3.0 hr >	⇒	extrusion < 0.5 hr >
manufacturing properties of metals < 3.0 hr >	⇒	manufacturing properties of alloys < 1.0 hr >
manufacturing properties of metals < 3.0 hr >	⇒	sheet forming processes < 0.5 hr >
manufacturing properties of metals < 3.0 hr >	⇒	shop practices < 0.5 hr >
material selection < 4.0 hr >	⇒	design for assembly < 1.0 hr >
material selection < 4.0 hr >	⇒	ideal cohesive strength < 0.5 hr >
material selection < 4.0 hr >	⇒	martensitic transformation < 0.5 hr >
material selection < 4.0 hr >	⇒	material indices of merit for optimization < 1.0 hr >
material selection < 4.0 hr >	⇒	metal cutting < 0.5 hr >
material selection < 4.0 hr >	⇒	microstructure studies < 1.0 hr >
material selection < 4.0 hr >	⇒	molecular properties of materials < 2.0 hr >
materials, structure of engineering < 5.0 hr >	⇒	ceramics < 2.0 hr >
materials, structure of engineering < 5.0 hr >	⇒	crystalline materials < 3.0 hr >
materials, structure of engineering < 5.0 hr >	⇒	iron carbon systems < 2.0 hr >
materials, structure of engineering < 5.0 hr >	⇒	material selection < 4.0 hr >
materials, structure of engineering < 5.0 hr >	⇒	microstructure modification < 1.0 hr >
metal cutting < 0.5 hr >	⇒	manufacturing properties of metals < 3.0 hr >
metal cutting < 0.5 hr >	⇒	sheet forming processes < 0.5 hr >
microstructure studies < 1.0 hr >	⇒	microstructure modification < 1.0 hr >

molecular properties of materials < 2.0 hr >	⇒	multifunctional materials < 1.0 hr >
molecular properties of materials < 2.0 hr >	⇒	multiphase systems < 1.0 hr >
nozzles, diffusers & throttles < 1.0 hr >	⇒	regeneration < 0.5 hr >
oxidation & reduction < 1.0 hr >	⇒	environmental impact of chemical processes < 0.5 hr >
plastics processing < 1.0 hr >	⇒	injection molding < 0.5 hr >
polymers < 1.0 hr >	⇒	design for environment < 1.0 hr >
polymers < 1.0 hr >	⇒	elastic behavior of polymers < 1.0 hr >
polymers < 1.0 hr >	⇒	material selection < 4.0 hr >
polymers < 1.0 hr >	⇒	multifunctional materials < 1.0 hr >
process planning < 1.0 hr >	⇒	design for assembly < 1.0 hr >
process planning < 1.0 hr >	⇒	product architecture < 1.0 hr >
product architecture < 1.0 hr >	⇒	product dissection < 1.0 hr >
recycling < 0.5 hr >	⇒	design for environment < 1.0 hr >
recycling < 0.5 hr >	⇒	environmental impact of chemical processes < 0.5 hr >
rolling < 0.5 hr >	⇒	sheet forming processes < 0.5 hr >
safety < 2.0 hr >	⇒	design for safety < 2.0 hr >
safety < 2.0 hr >	⇒	lab practices < 1.0 hr >
safety < 2.0 hr >	⇒	shop practices < 0.5 hr >
shop practices < 0.5 hr >	⇒	grinding < 0.5 hr >
steels: microstructure, heat treating & properties < 3.0 hr >	⇒	iron carbon systems < 2.0 hr >
steels: microstructure, heat treating & properties < 3.0 hr >	⇒	martensitic transformation < 0.5 hr >
steels: microstructure, heat treating & properties < 3.0 hr >	⇒	sheet forming processes < 0.5 hr >
strength of materials < 2.0 hr >	⇒	design for fatigue strength < 1.0 hr >
strength of materials < 2.0 hr >	⇒	linear elastic fracture mechanics < 1.0 hr >
strength of materials < 2.0 hr >	⇒	manufacturing processes < 3.0 hr >
strength of materials < 2.0 hr >	⇒	metal cutting < 0.5 hr >
strength of materials < 2.0 hr >	⇒	strength & multiaxial yield condition < 1.0 hr >
strength of materials < 2.0 hr >	⇒	strengthening mechanisms in metals & alloys < 1.0 hr >

strengthening mechanisms in metals & alloys < 1.0 hr > ⇒ steels: microstructure, heat treating & properties < 3.0 hr >
yielding criteria < 1.0 hr > ⇒ cyclic fatigue < 1.0 hr >
yielding criteria < 1.0 hr > ⇒ failure theories < 2.0 hr >