

Cluster F

75 topics < 82.25 hours >

prerequisites in other clusters linked

to topic here: 23

successors in other cluster linked to
topic here: 31

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cluster 89

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Prerequisite Topic \Rightarrow Successor
Topic

axles < 0.5 hr >	\Rightarrow	belts < 0.5 hr >
batteries & fuel cells < 0.5 hr >	\Rightarrow	dc power supplies < 0.5 hr >
bode plots < 1.0 hr >	\Rightarrow	frequency domain design methods < 2.0 hr >
bode plots < 1.0 hr >	\Rightarrow	poles & zeros < 1.0 hr >
chemical equilibrium < 1.0 hr >	\Rightarrow	batteries & fuel cells < 0.5 hr >
chemical equilibrium < 1.0 hr >	\Rightarrow	fuel cells < 0.5 hr >
chemical reactions < 2.0 hr >	\Rightarrow	batteries & fuel cells < 0.5 hr >
chemical reactions < 2.0 hr >	\Rightarrow	chemical equilibrium < 1.0 hr >
chemical reactions < 2.0 hr >	\Rightarrow	fuel cells < 0.5 hr >
chemical reactions < 2.0 hr >	\Rightarrow	stoichiometry < 2.0 hr >
complex numbers_3 < 0.5 hr >	\Rightarrow	power series < 1.0 hr >
compression in engineering materials < 1.0 hr >	\Rightarrow	compressive stresses in elastic materials < 1.0 hr >
compression < 1.0 hr >	\Rightarrow	compression in engineering materials < 1.0 hr >
compression < 1.0 hr >	\Rightarrow	shear stresses (measurement of) < 1.0 hr >
compression < 1.0 hr >	\Rightarrow	tensile stresses (measurement of) < 0.5 hr >
compression < 1.0 hr >	\Rightarrow	verification of strength of materials < 1.0 hr >
dc circuits_2 < 2.0 hr >	\Rightarrow	dc power supplies < 0.5 hr >
elastic properties of metals & ceramics_2 < 2.0 hr >	\Rightarrow	metal deformation < 0.5 hr >

electric current_2 < 2.0 hr >	⇒ dc circuits_2 < 2.0 hr >
equations, higher order linear differential_2 < 2.0 hr >	⇒ fourier analysis < 2.0 hr >
equations, higher order linear differential_2 < 2.0 hr >	⇒ higher order systems < 1.0 hr >
equations, higher order linear differential_2 < 2.0 hr >	⇒ series solutions of differential equations < 1.0 hr >
fourier analysis < 2.0 hr >	⇒ free response of multi-degree-of-freedom systems < 1.0 hr >
fourier analysis < 2.0 hr >	⇒ frequency domain design methods < 2.0 hr >
fourier analysis < 2.0 hr >	⇒ series solutions of differential equations < 1.0 hr >
free response of multi-degree-of-freedom systems < 1.0 hr >	⇒ linkages < 2.0 hr >
gears < 1.0 hr >	⇒ axles < 0.5 hr >
gears < 1.0 hr >	⇒ belts < 0.5 hr >
hardness tests < 1.0 hr >	⇒ verification of strength of materials < 1.0 hr >
identity matrix < 0.5 hr >	⇒ similarity & diagonalization < 0.5 hr >
linear dependence/independence_2 < 1.0 hr >	⇒ matrix rank < 0.5 hr >
linkages < 2.0 hr >	⇒ bar linkages & grashof's inequality < 1.0 hr >
matrices & determinants < 3.0 hr >	⇒ identity matrix < 0.5 hr >
matrices & determinants < 3.0 hr >	⇒ invariants < 1.0 hr >
matrices & determinants < 3.0 hr >	⇒ matrix inversion < 1.0 hr >
matrices & determinants < 3.0 hr >	⇒ matrix multiplication < 0.5 hr >
matrices & determinants < 3.0 hr >	⇒ matrix rank < 0.5 hr >
matrices & determinants < 3.0 hr >	⇒ moving reference frames < 1.0 hr >
matrices & determinants < 3.0 hr >	⇒ row reduction of matrices < 0.5 hr >
matrices & determinants < 3.0 hr >	⇒ similarity & diagonalization < 0.5 hr >
matrices & determinants < 3.0 hr >	⇒ state space representation < 2.0 hr >
matrix operations < 1.0 hr >	⇒ 2d geometrical transformations < 1.0 hr >
matrix operations < 1.0 hr >	⇒ identity matrix < 0.5 hr >
matrix operations < 1.0 hr >	⇒ matrices & determinants < 3.0 hr >
matrix operations < 1.0 hr >	⇒ matrix inversion < 1.0 hr >

matrix operations < 1.0 hr > ⇒ matrix multiplication < 0.5 hr >
matrix operations < 1.0 hr > ⇒ matrix rank < 0.5 hr >
matrix operations < 1.0 hr > ⇒ matrix/vector input < 0.25 hr >
matrix operations < 1.0 hr > ⇒ transformation diagrams < 1.0 hr >
matrix/vector input < 0.25 hr > ⇒ matrix inversion < 1.0 hr >
metal deformation < 0.5 hr > ⇒ die casting < 0.5 hr >
periodic table < 1.0 hr > ⇒ ions < 0.5 hr >
periodic table < 1.0 hr > ⇒ stoichiometry < 2.0 hr >
series < 1.0 hr > ⇒ fourier analysis < 2.0 hr >
series < 1.0 hr > ⇒ power series < 1.0 hr >
series < 1.0 hr > ⇒ series solutions of differential equations < 1.0 hr >
shear stresses (measurement of) < 1.0 hr > ⇒ forming < 0.5 hr >
stoichiometry < 2.0 hr > ⇒ chemical equilibrium < 1.0 hr >
strain hardening < 1.0 hr > ⇒ strength & hardness < 2.0 hr >
strain hardening < 1.0 hr > ⇒ strengthening mechanisms & processes < 1.0 hr >
strain hardening < 1.0 hr > ⇒ thermomechanical treatments < 1.0 hr >
strength & hardness < 2.0 hr > ⇒ strengthening mechanisms & processes < 1.0 hr >
strength & hardness < 2.0 hr > ⇒ tensile stresses (measurement of) < 0.5 hr >
strength & hardness < 2.0 hr > ⇒ tensile stresses in brittle materials < 0.5 hr >
strength of materials_2 < 2.0 hr > ⇒ strengthening mechanisms & processes < 1.0 hr >
stress-strain relations < 2.0 hr > ⇒ multiaxial stress-strain relations < 1.0 hr >
stress-strain relations < 2.0 hr > ⇒ strain energy < 2.0 hr >
stress-strain relations < 2.0 hr > ⇒ strain hardening < 1.0 hr >
stress-strain relations < 2.0 hr > ⇒ strength of materials_2 < 2.0 hr >
stress-strain relations < 2.0 hr > ⇒ stresses under axial forces < 1.0 hr >
stress-strain relations < 2.0 hr > ⇒ stresses, combined < 1.0 hr >
stresses in machines < 2.0 hr > ⇒ gears < 1.0 hr >
stresses under axial forces < 1.0 hr > ⇒ stresses under shearing forces < 1.0 hr >
stresses, combined < 1.0 hr > ⇒ fracture of metals < 1.0 hr >

stresses, combined < 1.0 hr >	⇒	stresses in machines < 2.0 hr >
tensile stresses (measurement of) < 0.5 hr >	⇒	tensile stresses in elastic materials < 0.5 hr >
tensile stresses in brittle materials < 0.5 hr >	⇒	compressive stresses in brittle materials < 1.0 hr >
tensile stresses in elastic materials < 0.5 hr >	⇒	belts < 0.5 hr >
tensile stresses in elastic materials < 0.5 hr >	⇒	compressive stresses in elastic materials < 1.0 hr >
torsion < 0.5 hr >	⇒	shear stresses (measurement of) < 1.0 hr >
torsion < 0.5 hr >	⇒	stresses, combined < 1.0 hr >
torsion < 0.5 hr >	⇒	torque, instruments to measure < 1.0 hr >
torsion < 0.5 hr >	⇒	torsion of circular shafts < 0.5 hr >
transfer functions < 1.0 hr >	⇒	bode plots < 1.0 hr >
transfer functions < 1.0 hr >	⇒	frequency domain design methods < 2.0 hr >
transfer functions < 1.0 hr >	⇒	higher order systems < 1.0 hr >
transformation diagrams < 1.0 hr >	⇒	time & frequency domain controller synthesis < 1.0 hr >
trusses < 2.0 hr >	⇒	fracture of metals < 1.0 hr >
trusses < 2.0 hr >	⇒	velocity & acceleration in mechanical linkages < 1.0 hr >