

University Mechanical Engineering

Glossary · every term in the course, A–Z

English

acceleration

/ək,selə'reɪʃn/

angle of twist

angular acceleration

/'æŋɡjʊlə ək,selə'reɪʃn/

angular momentum

/'æŋɡjʊlə məv'mentəm/

angular velocity

/'æŋɡjʊlə və'lʊsɪti/

applied loads

atomic packing factor

basis

/'beɪsɪs/

boundary work

buckling

Carnot

casting

/'kæstɪŋ/

centre of gravity

/'sentə vɒ 'grævɪti/

centroid

/'sentrɔɪd/

ceramic

characteristic equation

/,kærɪktə'rɪstɪk ɪ'kweɪʒn/

coefficient of kinetic friction

/,kəʊɪ'fɪʃənt vɒ kɪ'netɪk 'frɪkʃn/

coefficient of restitution

/,kəʊɪ'fɪʃənt vɒ rɪstɪ'tjuːʃn/

coefficient of static friction

/,kəʊɪ'fɪʃənt vɒ 'stætɪk 'frɪkʃn/

English

composite

/'kɒmpəzɪt/

compression

/kəm'preʃn/

concurrent

/kən'kʌrənt/

condition number

confidence interval

/'kɒnfɪdəns 'ɪntəvl/

control volume

corrosion

/kə'rəʊʒn/

couple

/'kʌpl/

crystal structure

curl

/kɜːl/

damped frequency

damping ratio

definite integral

/'defɪnət 'ɪntɪgrəl/

deflection

/dɪ'flekʃn/

derivative

/dɪ'rɪvətɪv/

direction

/daɪ'rekʃn/

dislocation

displacement

/dɪ'spleɪsmənt/

distributed load

/'dɪstrɪbjʊːtɪd ləʊd/

divergence

/daɪ'vɜːdʒəns/

divergence theorem

English
ductility /dʌkˈtɪlɪti/
dynamics /daɪˈnæmɪks/
eccentric loading
eigenvalue /ˈaɪɡən væljʊː/
eigenvector /ˈaɪɡənvektə/
elastic curve
energy method
engineering materials
engineering statics /ˌendʒɪˈnɪərɪŋ ˈstætɪks/
engineering stress
entropy /ˈentrəpi/
equation of motion
Euler method
eutectoid
expanded uncertainty
fatigue /fəˈtiːɡ/
fixed support /fɪkst səˈpɔːt/
flexure formula
flux /flʌks/
force /fɔːs/
frame /freɪm/
frames and machines /freɪmz ænd məˈʃiːnz/

English
free-body diagram /friː ˈbɒdi ˈdaɪəɡræm/
friction /ˈfrɪkʃn/
glass transition
gradient /ˈɡreɪdɪənt/
grain boundary
grain refinement
heat treatment
impending slip /ɪmˈpendɪŋ slɪp/
impulse /ˈɪmpʌls/
instant centre
isentropic
kinetic energy /kɪˈnetɪk ˈenədʒi/
lever rule
line of action /laɪn ɒv ˈækʃn/
linear momentum /ˈlɪnɪə məʊˈmentəm/
load /ləʊd/
magnification factor
magnitude /ˈmæɡnɪtjuːd/
martensite
mass moment of inertia
material index
mathematical methods /ˌmæθɪˈmætɪkl ˈmeθədz/

English
mechanics of materials
method of joints
<i>/ˈmeθəd ɒv dʒɔɪnts/</i>
method of sections
<i>/ˈmeθəd ɒv ˈsekʃnz/</i>
Mohr’s circle
moment
<i>/ˈməʊmənt/</i>
moment arm
<i>/ˈməʊmənt ɑːm/</i>
natural frequency
<i>/ˈnætʃərəl ˈfriːkwənsi/</i>
newton
<i>/ˈnjuːtn/</i>
normal force
<i>/ˈnɔːml fɔːs/</i>
normal stress
particle
<i>/ˈpɑːtɪkl/</i>
pearlite
phase diagram
pin
<i>/pɪn/</i>
Poisson’s ratio
polar coordinates
<i>/ˈpəʊlə kəʊˈɔːdɪnəts/</i>
position vector
<i>/pəˈzɪʃn ˈvektə/</i>
potential energy
<i>/pəˈtenʃl ˈenədʒi/</i>
precipitate
<i>/priˈsɪpɪteɪt/</i>
principal stress
projectile motion
<i>/prəˈdʒektail ˈməʊʃn/</i>

English
propagation of uncertainty
property diagram
quality
<i>/ˈkwɒlɪti/</i>
quenching
Rankine cycle
reaction
<i>/rɪˈækʃn/</i>
resonance
<i>/ˈrezənəns/</i>
resultant
<i>/rɪˈzʌltənt/</i>
rigid body
<i>/ˈrɪdʒɪd ˈbɒdi/</i>
roller
<i>/ˈrəʊlə/</i>
rolling without slipping
<i>/ˈrəʊlɪŋ wɪˈðəʊt ˈslɪpɪŋ/</i>
rotating frame
<i>/rəʊˈteɪtɪŋ freɪm/</i>
round-off error
rule of mixtures
saturation dome
Simpson’s rule
slider-crank mechanism
solidification
<i>/səˌlɪdɪfɪˈkeɪʃn/</i>
spring constant
<i>/sprɪŋ ˈkɒnstənt/</i>
state
<i>/steɪt/</i>
statically determinate
<i>/ˈstætɪkli dɪˈtɜːmɪnət/</i>
steady flow

English
strain /streɪn/
strain hardening
tempering
tension /ˈtɛnʃn/
thermodynamics /ˌθɜːməʊdaɪˈnæmɪks/
tipping
torque /tɔːk/
torsion /ˈtɔːʃn/
toughness
trajectory /trəˈdʒektəri/
transverse shear
trapezoidal rule /ˈtræpɪzɔɪdl ruːl/
true stress
truncation error
truss /trʌs/
two-force member /tuː fɔːs ˈmembə/
Type A uncertainty
T–s diagram
uncertainty /ʌnˈsɜːtənti/
underdamped
vapor-compression cycle
velocity /vəˈlɒsɪti/

English
viscoelasticity
volume of revolution /ˈvɒljʊːm ɒv ˌrevəˈluːʃn/
Weibull modulus
work /wɜːk/
yield strength
Young’s modulus
zero-force member /ˈzɪərəʊ fɔːs ˈmembə/