

University Electrical Engineering

Glossary

· every term in the course, A–Z

English

absorption

/əb'sɔ:pʃn/

AC circuit analysis

active region

ADC

/,eɪ di: 'si:/

adder

/'ædə/

air gap

aliasing

/'eɪlɪəsɪŋ/

ammeter

/'æmi:tə/

ammeter

/'æmi:tə/

ampere

/'æmpɛə/

Ampere's law

Ampère's law

/'æmpɛəz lɔ:/

amplitude modulation

antennas

anti-alias filter

anti-windup

argument

/'ɑ:gju:mənt/

armature

assembly

asymptote

/'æsmptəʊt/

English

at the clock edge

auxiliary equation

/ɔ:k'sɪliəri i'kwɛɪʒn/

back-EMF

bandwidth

/'bændwɪðθ/

base value

baud rate

bias point

BIBO stability

BIBO stability

bilinear transform

binary

/'bɪnəri/

Biot-Savart law

Biot–Savart law

/'bi:t 'sævɑ:t lɔ:/

bipolar junction transistor

block diagram

Bode plot

Boolean algebra

/'bu:liən 'ældʒɪbrə/

boost

bounce diagram

boundary conditions

breakaway point

breakdown torque

bridge rectifier

/brɪdʒ 'rektɪfaɪə/

English

buck

bus

/bʌs/

butterfly

capacitance

/kə'pæsɪtəns/

capacitor

/kə'pæsɪtə/

Carson's rule

cascade

causality

channel capacity

characteristic equation

/ˌkærɪktə'rɪstɪk rɪ'kweɪʒn/

characteristic impedance

charge

/tʃɑːdʒ/

clock

/klɒk/

clock edge

/klɒk edʒ/

combinational logic

/ˌkɒmbɪ'neɪʃənl 'lɒdʒɪk/

communication systems

commutator

/'kɒmjʊːteɪtə/

complex number

/'kɒmpleks 'nʌmbə/

complex power

conductance

conserved

/kən'sɜːvd/

constant-drop model

English

constellation

continuous conduction

control systems

controllability

convolution

copper loss

core loss

corner frequency

coulomb

/ˈkuːlɒm/

coupling capacitor

critically damped

curl

/kɜːl/

current

/ˈkʌrənt/

current divider

/ˈkʌrənt diˈvaɪdə/

cutoff

cutoff frequency

/ˈkʌtɒf ˈfriːkwənsi/

DAC

/ˌdiː eɪ ˈsiː/

damping

/ˈdæmpɪŋ/

damping ratio

De Morgan's theorem

/də ˈmɔːgənz ˈθɪərəm/

debounce

decibel

English

decimation

decoder

/dɪ'kəʊdə/

derivative

/dɪ'rɪvətɪv/

derivative

/dɪ'rɪvətɪv/

determinant

/dɪ'tɜːmɪnənt/

DFT

difference equation

digital logic design

/ˈdɪdʒɪtl 'lɒdʒɪk dɪ'zain/

digital signal processing

dipole

/ˈdaɪpəl/

direct-current circuit

analysis

/daɪ'rekt 'kʌrənt 'sɜːkɪt ə'næləsis/

displacement current

/dɪ'spleɪsmənt 'kʌrənt/

divergence

/daɪ'vɜːdʒəns/

dominant pole

don't-care

/dəʊnt keə/

doping

DTFT

duty cycle

eddy current

eigenvalue

/ˈaɪɡənvæljuː/

electrical machines and
power systems

English

electromagnetics

electronics I

encirclement

energy

/ˈenədʒi/

entropy

/ˈentrəpi/

envelope detector

Euler's identity

/ˈɔɪləz aɪˈdɛntɪti/

excitation

excitation table

/eksɪˈteɪʃn ˈteɪbl/

expectation

/ekspɪkˈteɪʃn/

exponential model

/ˌekspeˈnenʃl ˈmɒdl/

farad

/ˈfæræd/

fault current

feedback

/ˈfiːdbæk/

fetch-decode-execute cycle

fetch–decode–execute cycle

FFT

field weakening

filter

/ˈfɪltə/

filter capacitor

finite state machine

/ˈfaɪnaɪt steɪt məˈʃiːn/

English

FIR

flip-flop

/flɪp flɒp/

flux

/flʌks/

flux

/flʌks/

Fourier series

/'fɔːrɪə 'sɪəriːz/

Fourier transform

frequency deviation

frequency response

Friis equation

full adder

/fʊl 'ædə/

fundamental

/'fʌndə'mentl/

gain crossover

gain margin

gain-bandwidth product

/geɪn 'bændwɪðθ 'prɒdʌkt/

Gauss's law

/'gaʊsɪz lɔː/

golden rule

/'gəʊldn ruːl/

good conductor

GPIO

gradient

/'ɡreɪdɪənt/

guide wavelength

half adder

/hɑːf 'ædə/

half-wave rectifier

English

Hamming code

Hamming window

hardware description
language

/ˈhɑːdweə dɪ'skrɪpʃn 'læŋɡwɪdʒ/

harmonic

/hɑː'mɒnɪk/

hazard

/ˈhæzəd/

henry

/ˈhenri/

hexadecimal

/ˌheksə'desɪml/

homogeneous

/ˌhɒmə'dʒiːniəs/

hysteresis

I2C

ideal model

ideal op-amp

ideal operational amplifier

/aɪ'diəl ɒpə'reɪʃənl 'æmplɪfaɪə/

IIR

impedance

/ɪm'piːdəns/

impulse response

impulse response

inductance

/ɪn'dʌktəns/

inductor

/ɪn'dʌktə/

infinite bus

English

initial condition

/ɪˈnɪʃl kənˈdɪʃn/

instantaneous frequency

integral

/ˈɪntɪgrəl/

interpolation

/ɪnˌtɜːpəˈleɪʃn/

interrupt

/ˈɪntərʌpt/

interrupt service routine

/ˈɪntərʌpt ˈsɜːvɪs ruːˈtiːn/

intrinsic impedance

intrinsic impedance

inverting amplifier

/ɪnˈvɜːtɪŋ ˈæmplɪfaɪə/

joule

/dʒuːl/

Karnaugh map

/ˈkɑːnəː mæp/

kilowatt-hour

/ˈkɪləwɒt ˈaʊə/

Kirchhoff's current law

/ˈkɜːkhɒfs ˈkʌrənt lɔː/

Kirchhoff's voltage law

/ˈkɜːkhɒfs ˈvəʊltɪdʒ lɔː/

Laplace transform

latch

/lætʃ/

lead compensator

leakage

linear phase

linear system

/ˈlɪnɪə ˈsɪstəm/

linear time-invariant

English

linearity

/lɪˈnɪərɪti/

linearization

/ˌlɪnɪəraɪˈzeɪʃn/

loop

/luːp/

loop gain

Lorentz force

lossy medium

LSB

magnetic flux

/mægˈnetɪk flʌks/

magnetomotive force

marginal stability

mathematical methods

/ˌmæθɪˈmætɪkl ˈmeθədz/

matrix inverse

/ˈmetrɪks ɪnˈvɜːs/

maximum power transfer

/ˈmæksɪmə ˈpaʊə ˈtrænsfɜː/

Mealy machine

/ˈmiːli məˈʃɪːn/

measure

/ˈmeʒə/

memory

/ˈmeməri/

memory-mapped I/O

memory-mapped I/O

memory-mapped register

mesh analysis

/meʃ əˈnæləsis/

mesh current

/meʃˈkʌrənt/

English

microcontroller

microprocessors and
embedded systems

Miller capacitance

modelling

/ˈmɒdəlɪŋ/

modulation index

modulus

/ˈmɒdjʊləs/

Moore machine

/mʊə məˈʃiːn/

MOSFET

multimeter

/ˌmʌltɪˈmi:tə/

multiplexer

/ˌmʌltɪpleksə/

natural frequency

/ˈnætʃərəl ˈfriːkwənsi/

natural frequency

/ˈnætʃərəl ˈfriːkwənsi/

natural response

/ˈnætʃərəl rɪˈspɒns/

negative feedback

/ˈnegətɪv ˈfiːdbæk/

nodal analysis

/ˈnɒdl əˈnæləsis/

node

/nɒd/

noise figure

non-inverting amplifier

/nɒn ɪnˈvɜːtɪŋ ˈæmplɪfaɪə/

Norton's theorem

/ˈnɔːtnz ˈθɪərəm/

Nyquist criterion

English

Nyquist criterion

ohm

/əʊm/

Ohm's law

/əʊmz lɔ:/

open-circuit test

open-circuit voltage

operating point

operational amplifier

/,ɒpə'reɪʃənəl 'æmplɪfaɪə/

ordinary differential
equation

/'ɔ:dnəri ,dɪfə'renʃl ɪ'kweɪʒn/

orthogonality

/,ɔ:θəgə'nælɪti/

overdamped

overflow

/,əʊvə'fləʊ/

overshoot

/,əʊvə'ʃu:t/

parallel

/'pærəlel/

partial fraction

/'pɑ:ʃl 'frækʃn/

particular

/pə'tɪkjʊlə/

passive sign convention

/'pæsɪv saɪn kən'venʃn/

peak inverse voltage

peak time

per-unit

phase

/feɪz/

phase crossover

English

phase margin

phasor

/ˈfeɪzɔː/

PID controller

piecewise-linear model

plane wave

plant

/plænt/

pn junction

polarisation

/ˌpəʊləraɪˈzeɪʃn/

pole

/pəʊl/

pole placement

poles and zeros

polling

polyphase

potential

/pəˈtenʃl/

power

/ˈpaʊə/

power angle

power factor

power factor correction

power flow

power limit

power-factor correction

Poynting vector

/ˈpɔɪntɪŋ ˈvektə/

prescaler

English

prewarp

probability distribution

/ˌprɒbəˈbɪlɪtɪ ˌdɪstrɪˈbjʊːʃn/

processing gain

program counter

/ˈprəʊgræm ˈkaʊntə/

proportional

/prəˈpɔːʃnəl/

Q factor

quantisation

/ˌkwɒntaɪˈzeɪʃn/

raised-cosine

random variable

/ˈrændəm ˈveəriəbl/

range

/reɪndʒ/

reactive compensation

rectangular pulse

/rekˈtæŋɡjʊlə pʌls/

reference node

/ˈrefrəns nəʊd/

register

/ˈredʒɪstə/

reluctance

resistor

/rɪˈzɪstə/

resolution

/ˌrezəˈluːʃn/

resonance

/ˈrezənəns/

ripple

/ˈrɪpl/

ripple counter

/ˈrɪpl ˈkaʊntə/

rise time

English

root locus

rotating field

Routh array

saturation

/ˌsætʃəˈreɪʃn/

saturation region

sequential logic

/siːˈkwɛnʃl ˈlɒdʒɪk/

series

/ˈsiəriːz/

series motor

settling time

shift register

/ʃɪft ˈredʒɪstə/

short-circuit test

shunt motor

sideband

signal

/ˈsɪgnl/

signals and systems

simulation

/ˌsɪmjʊˈleɪʃn/

singular

/ˈsɪŋɡjʊlə/

skin depth

slack bus

slip

small-signal

source transformation

/sɔːs trænʃɔːˈmeɪʃn/

English

SPI

square-law model

squirrel-cage

standard deviation

/ˈstændəd ˌdiːviˈeɪʃn/

state diagram

/steɪt ˈdaɪəɡræm/

state space

state variable

static margin

steady-state error

step response

/step rɪˈspɒns/

summing amplifier

superposition

/ˌsuːpəpəˈzɪʃn/

synchronous counter

/ˈsɪŋkrənəs ˈkaʊntə/

synchronous machine

synchronous rectification

synchronous speed

synthesis

/ˈsɪnθəsis/

synthesizable

/ˈsɪnθəsaɪzəbl/

system

/ˈsɪstəm/

system function

system type

telegrapher equations

English

testbench

/ˈtestbentʃ/

Thévenin's theorem

three-phase

threshold

/ˈθreʃəʊld/

time constant

/taɪm ˈkɒnstənt/

time invariance

time-bandwidth trade-off

timer

time-bandwidth trade-off

toggle

/ˈtɒɡl/

transfer function

transformer

/ˈtrænsˈfɔːmə/

transient response

/ˈtrænsɪənt rɪˈsɒns/

transimpedance amplifier

transition matrix

/trænˈsɪʃn ˈmeɪtrɪks/

twiddle factor

two's complement

/tuːz ˈkɒmplɪmənt/

two-port

two-port network

UART

underdamped

English

unit circle

/ˈjuːnɪt ˈsɜːkl/

variance

/ˈveəriəns/

velocity error constant

virtual ground

virtual short

/ˈvɜːtʃuəl ʃɔːt/

volt

/vəʊlt/

volt-second balance

voltage

/ˈvəʊltɪdʒ/

voltage divider

/ˈvəʊltɪdʒ dɪˈvaɪdə/

voltage divider bias

voltage follower

voltage gain

watchdog

watt

/wɒt/

waveguide wavelength

wound rotor

z-transform

zener diode
