

12-Week FE Exam Study Schedule

FE Mechanical · suggested 8–10 hours a week · Exam date: _____

Week 1

Starts: _____

Set-up and mathematics

- ☐ Download the FE Reference Handbook from MyNCEES and skim its table of contents
- ☐ Read the NCEES FE Mechanical specification and mark your weakest areas
- ☐ Mathematics: calculus, differential equations, linear algebra, numerical methods
- ☐ Work 15 timed problems at about 3 minutes each, using only the handbook and your approved calculator

Week 2

Starts: _____

Probability, statistics, economics, ethics

- ☐ Statistics: distributions, mean and standard deviation, regression
- ☐ Engineering economics: present worth, annuities, rate of return
- ☐ Ethics: read the NCEES Model Law and Model Rules on professional conduct, then work example scenarios
- ☐ Work 20 timed problems at about 3 minutes each, using only the handbook and your approved calculator

Week 3

Starts: _____

Statics

- ☐ Review the statics lessons and print the statics cheat sheet
- ☐ Equilibrium, trusses, friction, centroids and moments of inertia
- ☐ Work the 5 FE statics practice problems
- ☐ Work 20 timed problems at about 3 minutes each, using only the handbook and your approved calculator

Week 4

Starts: _____

Dynamics, kinematics and vibrations

- ☐ Kinematics and kinetics of particles and rigid bodies
- ☐ Work–energy and impulse–momentum
- ☐ Free and forced vibration of a single degree of freedom
- ☐ Work 20 timed problems at about 3 minutes each, using only the handbook and your approved calculator

Week 5

Starts: _____

Mechanics of materials

- ☐ Print the mechanics of materials cheat sheet
- ☐ Axial, torsion, bending, shear, combined loading, Mohr's circle, buckling
- ☐ Work the 5 FE mechanics of materials practice problems
- ☐ Work 20 timed problems at about 3 minutes each, using only the handbook and your approved calculator

Week 6

Starts: _____

Materials and electrical

- ☐ Material properties and processing: stress–strain, phase diagrams, heat treatment, manufacturing processes
- ☐ Electricity and magnetism: DC and AC circuits, motors
- ☐ Work 20 timed problems at about 3 minutes each, using only the handbook and your approved calculator

Week 7

Starts: _____

Fluid mechanics

- ☐ Print the fluid mechanics cheat sheet
- ☐ Hydrostatics, Bernoulli and the energy equation, pipe losses, pumps, momentum
- ☐ Work 20 timed problems at about 3 minutes each, using only the handbook and your approved calculator

Week 8

Starts: _____

Thermodynamics

- ☐ Print the thermodynamics cheat sheet
- ☐ Properties and tables, first and second law, cycles, psychrometrics
- ☐ Work 20 timed problems at about 3 minutes each, using only the handbook and your approved calculator

Week 9

Starts: _____

Heat transfer

- ☐ Conduction, convection and radiation; resistance networks; heat exchangers
- ☐ Work 20 timed problems at about 3 minutes each, using only the handbook and your approved calculator
- ☐ Re-work every problem you missed in weeks 3–8

Week 10

Starts: _____

Measurement, controls and design

- ☐ Measurements, instrumentation and controls: sensors, uncertainty, block diagrams
- ☐ Mechanical design: machine-element stress, failure theories, springs, bearings, joints; GD&T with the GD&T cheat sheet
- ☐ Work 25 timed problems at about 3 minutes each, using only the handbook and your approved calculator

Week 11

Starts: _____

Mixed review

- ☐ Two mixed sets of 30 problems, timed, from every area
- ☐ List your three weakest areas and re-study them
- ☐ Practise handbook searches for the formulas you looked up most

Week 12

Starts: _____

Full practice exam and exam week

- ☐ Take a full-length timed practice exam early in the week
- ☐ Review every miss; light review only in the last two days
- ☐ Check your ID, appointment time and calculator model against the NCEES rules