



SKILL GRID ACADEMY

COURSE CATALOG 2026

MEPF & HVAC&R Engineering Training · 45-Day Job-Oriented Programs
Placement-Driven · Taught by Working Engineers · Secunderabad

ABOUT THE ACADEMY

Engineering careers, built the practical way

Skill Grid Academy Private Limited · Skill · Learn · Placed

Skill Grid Academy is a Secunderabad-based training institute specialising in **MEPF building-services engineering - Mechanical, Electrical, Plumbing and Fire Fighting - with deep expertise in HVAC&R** (Heating, Ventilation, Air-Conditioning and Refrigeration). Every program is a 45-day, job-oriented batch taught by working design engineers, built around live building projects, and backed by a dedicated placement cell.

2,400+
Students trained

88%
Placement rate

120+
Hiring partners

4.7 / 5
Average rating

Why students choose Skill Grid

Hybrid learning - classroom batches plus recorded lessons, so you can revise anytime. **Real projects** - every course ends with a capstone designed on an actual building. **Working trainers** - courses are taught by engineers who design MEPF systems every day. **Placement engine** - a live job board, application tracking and interview preparation, not just a wall of photos. **Verifiable certificates** - every certificate carries a unique code employers can verify.

How it works

1. **Enroll** - book a free demo class on WhatsApp (+91 98665 56253), visit the academy and join a batch.
2. **Learn by doing** - live classes, software labs, assignments and a real capstone project.
3. **Get placed** - earn a verified certificate, build your portfolio and interview with our hiring partners.

Programs at a glance

COURSE	STREAM	DURATION	FEE
MEPF (Full Stack)	Multi-discipline	45 days	Rs. 55,000
HVAC&R Design	Mechanical	45 days	Rs. 35,000
Electrical Design	Electrical	45 days	Rs. 32,000
Plumbing Design	Public Health (PHE)	45 days	Rs. 28,000
Fire Fighting Design	Fire & Life Safety	45 days	Rs. 30,000
Revit MEP (BIM)	BIM	45 days	Rs. 38,000

COURSE 01 · MULTI-DISCIPLINE

MEPF (Full Stack)

Our flagship program. One integrated course covering all four building-services disciplines - Mechanical (HVAC&R), Electrical, Plumbing and Fire Fighting - plus BIM coordination in Revit MEP. Designed for engineers who want to work as full MEPF design engineers in consultancies and contracting companies.

Duration	45 days (weekday & weekend batches) · classroom + recorded lessons
Course fee	Rs. 55,000 (installments available · offline payment at academy)
Software / tools	Revit MEP, HAP, DIALux, AutoCAD, Duct Sizer, MS Excel
Eligibility	Diploma / B.E. / B.Tech (Mechanical, Electrical, Civil, EEE, ECE) - freshers & working professionals
Certificate	Verified certificate with unique QR/verification code + capstone project portfolio

Detailed curriculum

MODULE	TOPICS COVERED
Module 1 · HVAC&R; design	Refrigeration cycle and psychrometrics; heat-load calculation (E-20 form and HAP); duct sizing and static pressure; VRF/VRV and chilled-water system design; equipment selection (AHU, FCU, chillers, cooling towers); ventilation as per ASHRAE 62.1; car-park and staircase-pressurisation ventilation.
Module 2 · Electrical design	Load estimation with demand and diversity factors; single line diagrams (SLD); transformer and DG sizing; cable sizing and voltage-drop calculations; earthing (IS 3043) and lightning protection (IEC 62305); lighting design in DIALux; panel schedules and switchgear selection.
Module 3 · Plumbing (PHE) design	Water demand and fixture-unit calculations; pipe sizing (Hazen-Williams); storage tank, sump and pump sizing; hot-water systems; soil, waste and vent drainage design; storm-water and rainwater harvesting; STP/WTP basics per NBC Part 9 and IS 1172.
Module 4 · Fire fighting design	Occupancy and hazard classification (NBC Part 4); sprinkler system design to NFPA 13; hydrant and standpipe systems (NFPA 14 / IS 3844); fire pump-room design to NFPA 20; fire alarm and detection basics (NFPA 72); hydraulic calculations and fire-water storage.
Module 5 · Revit MEP & coordination	Revit MEP modelling of all four services; linking architectural models; clash detection in Navisworks; shop drawings and coordinated builders-work drawings; quantity take-off and BOQ.
Module 6 · Professional practice & capstone	Reading tender drawings and specifications; BOQ, costing and estimation basics; site execution overview; resume building, mock interviews and a full-building MEPF capstone project for your portfolio.

What you will be able to do

Independently design and draft complete MEPF systems for a commercial building, produce coordinated drawings and BOQs, and present a capstone project in interviews for MEP design-engineer roles.

COURSE 02 · MECHANICAL

HVAC&R; Design

The academy's core specialisation. A deep, calculation-first course in Heating, Ventilation, Air-Conditioning and Refrigeration design for commercial and residential buildings, aligned to ASHRAE and ISHRAE practice.

Duration	45 days (weekday & weekend batches) · classroom + recorded lessons
Course fee	Rs. 35,000 (installments available · offline payment at academy)
Software / tools	HAP (Carrier), McQuay Duct Sizer, AutoCAD, MS Excel, psychrometric tools
Eligibility	Diploma / B.E. / B.Tech (Mechanical, Electrical, Civil, EEE, ECE) - freshers & working professionals
Certificate	Verified certificate with unique QR/verification code + capstone project portfolio

Detailed curriculum

MODULE	TOPICS COVERED
Module 1 · Fundamentals	Basics of thermodynamics and heat transfer; vapour-compression refrigeration cycle; refrigerants and their selection; psychrometry and the psychrometric chart; human comfort conditions (ASHRAE 55); air-conditioning system classifications.
Module 2 · Heat-load estimation	Building survey and U-value calculation; CLTD method; manual load calculation on the E-20 form; computerised load modelling in Carrier HAP; ventilation and infiltration loads; fresh-air requirements per ASHRAE 62.1.
Module 3 · Air-side design	Air distribution systems; duct design by equal-friction and velocity methods using Duct Sizer; SMACNA duct construction standards; static-pressure calculation and fan selection; diffuser, grille and VAV selection; kitchen, toilet and car-park ventilation with jet fans; staircase and lift-well pressurisation.
Module 4 · Water-side & VRF systems	DX and split systems; VRF/VRV design and pipe sizing; chilled-water systems - chillers, primary/secondary pumping, cooling towers; chilled-water pipe sizing and pump-head calculation; AHU/FCU selection.
Module 5 · Refrigeration	Cold-room and cold-storage load calculation; refrigerant piping design; walk-in chillers and freezers; condensing-unit selection; defrost and controls basics.
Module 6 · Drafting, BOQ & capstone	HVAC layout drafting in AutoCAD; schematic and riser diagrams; equipment schedules and BOQ preparation; ISHRAE/ASHRAE handbook usage; capstone: complete HVAC design of a commercial floor.

What you will be able to do

Perform heat-load calculations manually and in HAP, design duct and chilled-water/VRF systems, select equipment, and deliver tender-ready HVAC drawings and BOQs.

COURSE 03 · ELECTRICAL

Electrical Design

Building electrical-systems design to Indian and international standards - from load estimation to protection, earthing and lighting - for residential, commercial and industrial projects.

Duration	45 days (weekday & weekend batches) · classroom + recorded lessons
Course fee	Rs. 32,000 (installments available · offline payment at academy)
Software / tools	DIALux, AutoCAD, MS Excel
Eligibility	Diploma / B.E. / B.Tech (Mechanical, Electrical, Civil, EEE, ECE) - freshers & working professionals
Certificate	Verified certificate with unique QR/verification code + capstone project portfolio

Detailed curriculum

MODULE	TOPICS COVERED
Module 1 · Power-system basics	LT/HT distribution overview; utility supply and metering; IS, IEC and NEC standards landscape; electrical safety fundamentals.
Module 2 · Load estimation & schedules	Lighting and small-power load calculations; demand and diversity factors; load schedules and panel design; DB, SMDB and MDB architecture; rising mains and busbar trunking.
Module 3 · Equipment sizing & SLD	Single line diagrams; transformer sizing; DG-set and UPS sizing; switchgear selection - MCB, MCCB, ACB, RCCB/ELCB; short-circuit basics and breaker coordination; power-factor correction and capacitor banks.
Module 4 · Cable & containment design	Cable types and selection; cable sizing with derating factors; voltage-drop calculation; cable tray, trunking and conduit (containment) sizing; typical installation details.
Module 5 · Lighting design	Illumination principles and recommended lux levels; interior and exterior lighting design in DIALux; emergency and exit lighting; facade and street-lighting basics.
Module 6 · Earthing, protection & capstone	Earthing-system design to IS 3043; lightning protection to IEC 62305; ELV overview (CCTV, access, data); electrical layout drafting in AutoCAD; BOQ preparation; capstone: complete electrical design of a commercial building.

What you will be able to do

Prepare load schedules, SLDs, cable and containment designs, DIALux lighting layouts, and earthing/lightning-protection schemes ready for consultant review.

COURSE 04 · PUBLIC HEALTH (PHE)

Plumbing Design

Public-health engineering design: water supply, drainage and storm-water systems for residential and commercial buildings, per NBC Part 9, IS 1172 and international plumbing codes (IPC/UPC).

Duration	45 days (weekday & weekend batches) · classroom + recorded lessons
Course fee	Rs. 28,000 (installments available · offline payment at academy)
Software / tools	AutoCAD, Revit, MS Excel
Eligibility	Diploma / B.E. / B.Tech (Mechanical, Electrical, Civil, EEE, ECE) - freshers & working professionals
Certificate	Verified certificate with unique QR/verification code + capstone project portfolio

Detailed curriculum

MODULE	TOPICS COVERED
Module 1 · Fundamentals & codes	Plumbing-system overview; water sources and quality; sanitary fixtures and fittings; NBC Part 9, IS 1172, IPC and UPC code landscape.
Module 2 · Water-supply design	Population-based and fixture-unit water-demand calculations; pipe sizing by Hazen-Williams; gravity, up-feed and hydro-pneumatic distribution systems; storage-tank and sump sizing; transfer and booster pump selection with head calculations; PRV zoning in high-rises.
Module 3 · Hot water & special systems	Water-heater and calorifier sizing; hot-water recirculation; solar hot-water basics; swimming-pool and landscape-irrigation overview; LPG/gas piping introduction.
Module 4 · Drainage design	Soil, waste and vent systems; drainage fixture units; stack and branch sizing; trap and vent rules; external drainage, manholes and invert levels; sewage and sump pumps.
Module 5 · Storm water & sustainability	Rainfall intensity and roof-drainage design; storm-water pipe and channel sizing; rainwater harvesting; grey-water reuse; STP and WTP fundamentals.
Module 6 · Drafting, BOQ & capstone	Water-supply and drainage layouts in AutoCAD/Revit; riser diagrams and isometrics; pump-room and plumbing-shaft details; BOQ preparation; capstone: complete PHE design of a residential tower.

What you will be able to do

Size complete water-supply, drainage and storm-water systems, select pumps and tanks, and produce professional PHE drawings, schematics and BOQs.

COURSE 05 · FIRE & LIFE SAFETY

Fire Fighting Design

Fire-protection system design per NBC Part 4 and NFPA standards - sprinklers, hydrants, pumps, and detection - the discipline that completes the F in MEPF.

Duration	45 days (weekday & weekend batches) · classroom + recorded lessons
Course fee	Rs. 30,000 (installments available · offline payment at academy)
Software / tools	AutoCAD, hydraulic calculation tools, MS Excel
Eligibility	Diploma / B.E. / B.Tech (Mechanical, Electrical, Civil, EEE, ECE) - freshers & working professionals
Certificate	Verified certificate with unique QR/verification code + capstone project portfolio

Detailed curriculum

MODULE	TOPICS COVERED
Module 1 · Fire science & codes	Fire chemistry and classes of fire; occupancy and hazard classification; NBC Part 4 requirements; NFPA code landscape; means of egress and passive protection overview.
Module 2 · Water demand & storage	Fire-water demand calculation; static storage-tank sizing; fire-water zoning in high-rise buildings; hydraulic-calculation fundamentals.
Module 3 · Sprinkler systems (NFPA 13)	Hazard-based design densities; sprinkler types and K-factors; spacing and location rules; pipe sizing by hydraulic calculation; zone control valves and flow switches.
Module 4 · Hydrants & standpipes	Internal and yard hydrant systems (IS 3844 / NFPA 14); hose reels and hose cabinets; fire-brigade inlets; pressure-reducing arrangements in tall buildings.
Module 5 · Fire pumps & suppression	Fire pump-room design to NFPA 20 - main, standby (diesel) and jockey pumps; header and piping layout; fire alarm and detection basics (NFPA 72); clean-agent/gas suppression (NFPA 2001); kitchen suppression and portable extinguishers (IS 2190).
Module 6 · Drafting, approvals & capstone	Fire-fighting layouts and schematics in AutoCAD; pump-room detail drawings; BOQ preparation; fire NOC and authority-approval process overview; capstone: sprinkler + hydrant design for a commercial building.

What you will be able to do

Design code-compliant sprinkler, hydrant and fire-pump systems with hydraulic calculations, and prepare drawings suitable for fire-authority submission.

COURSE 06 · BUILDING INFORMATION MODELLING

Revit MEP (BIM)

BIM modelling and clash-free coordination of MEPF services - the most in-demand drafting skill in the industry today, and the perfect add-on to any design discipline.

Duration	45 days (weekday & weekend batches) · classroom + recorded lessons
Course fee	Rs. 38,000 (installments available · offline payment at academy)
Software / tools	Autodesk Revit MEP, Navisworks
Eligibility	Diploma / B.E. / B.Tech (Mechanical, Electrical, Civil, EEE, ECE) - freshers & working professionals
Certificate	Verified certificate with unique QR/verification code + capstone project portfolio

Detailed curriculum

MODULE	TOPICS COVERED
Module 1 · BIM concepts & setup	What BIM is - LOD 100 to 500; BIM execution plans; Revit interface and terminology; project templates, units and browser organisation; worksets and worksharing for team projects.
Module 2 · Linking & coordination setup	Linking architectural and structural models; levels, grids and scope boxes; Copy/Monitor; shared coordinates; spaces and zones.
Module 3 · HVAC modelling	Mechanical settings; duct routing and fittings; mechanical equipment placement; duct systems and system browser; pressure-drop and sizing tools; hydronic piping for chilled-water systems.
Module 4 · Plumbing & fire modelling	Pipe types and routing; sloped drainage piping; plumbing fixtures; sprinkler layouts and piping; system filters and colour schemes.
Module 5 · Electrical modelling	Lighting fixtures and switches; power devices and circuits; panel schedules; cable-tray and conduit modelling; lighting analysis basics.
Module 6 · Families, documentation & capstone	Creating and editing MEP families; annotation, tagging and dimensioning; schedules and quantity take-off (BOQ); sheets, title blocks and printing; clash detection and reports in Navisworks; capstone: fully coordinated MEPF model of a building.

What you will be able to do

Model all MEPF services in Revit, run clash detection in Navisworks, extract BOQs and produce coordinated shop drawings - portfolio-ready for BIM modeller roles.

PLACEMENTS

From classroom to consultancy

A placement engine, not a placement promise.

Placement support starts on day one, not after the course. Every student gets profile building, a capstone-project portfolio, mock technical interviews with working engineers, and access to our live job board where openings from 120+ hiring partners are posted and tracked through every stage - Applied, Shortlisted, Interview, Placed.

The placement process

1. **Profile & resume building** - engineering resumes formatted the way consultancies expect.
2. **Portfolio** - your capstone project becomes a portfolio you present in interviews.
3. **Mock interviews** - technical and HR rounds with real design engineers, with feedback.
4. **Job board & referrals** - live openings from hiring partners, plus direct referrals.
5. **Offer support** - guidance on offers, notice periods and onboarding.

Recent openings through our network

ROLE	COMPANY	LOCATION	PACKAGE
MEP Design Engineer	Aurora Consultants	Hyderabad	Rs. 4.5 - 6 LPA
HVAC Draughtsman	CoolTech Projects	Vijayawada	Rs. 3 - 4 LPA
Electrical Design Trainee	Voltline Pvt Ltd	Hyderabad	Rs. 3.2 - 4.2 LPA
Revit MEP Modeller	BIMworks	Bengaluru	Rs. 5 - 7 LPA

Packages shown are indicative ranges from recent partner openings; actual offers depend on the role, company and candidate.

Success stories

"I joined with zero software skills. In 45 days I built a full MEP project and got placed at a consultancy." - **Praveen K.**, MEP Engineer, Aurora

"The recorded lessons let me revise after class. The placement team genuinely pushed my profile." - **Sneha R.**, HVAC Designer, CoolTech

"Best decision for my career. Real projects, patient trainers, and a job within a month." - **Imran A.**, Revit Modeller, BIMworks

Certification

Every graduate receives a **Certificate of Completion** carrying a unique verification code (e.g. SGA-MEPF-4821) that employers can verify with the academy - so your certificate is proof, not paper.

JOIN THE NEXT BATCH

Book your free demo class

New 45-day batches start every month at Secunderabad. Limited seats per batch.

Attend one class free, meet the trainers, see the labs and the live projects - then decide. Message us on WhatsApp and our team will confirm your seat for the next demo session.

WhatsApp / Phone	+91 98665 56253
Email	skillgrid26@gmail.com
Address	509, 5th Floor, H.No. 9-1-119/1, St Johns Rd, Railway Colony, Chilakalguda, Secunderabad, Telangana 500003
Director - Technical	Mohammed Asif Basha

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