DEMING TRAINING CENTER
OPERATIONAL EXCELLENCE

AMERICAN BOARD®

CERTIFIED TRAINING PROGRAM

MECHANICAL DESIGN EXPERT

SOLIDWORKS OR PTC CREO CAD + ISO GPS



Design | Model | Assemble | Validate

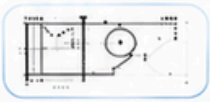
CHOOSE YOUR LEARNING PATH

CAD – 50 HOURS
SolidWorks or PTC Creo

ISO GPS – 20 HOURS
Standalone module

FULL PROGRAMME – 70 HOURS
CAD + ISO GPS (Recommended)

CAD (SOLIDWORKS OR PTC CREO) – 50 HOURS



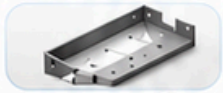
01 Sketching & Design Intent
Parametric design, 2D/3D sketches, relations, dimensioning and constraint diagnostics.



02 3D Modelling
Extrusions, revolutions, fillets, chamfers, drafts, shells, holes and tapped holes.



03 Complex Shapes
Sweeps, lofts, complex patterns, equations and global variables.



04 Sheet Metal & Weldments
Bends, reliefs, flat patterns, DXF, tubular structures, welds, gussets and cut lists.

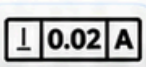


05 Assembly & Kinematics
Bottom-Up, Top-Down, advanced assembly constraints, standard components, interference detection, clearance checks and basic motion.

ISO GPS – 20 HOURS

Link design with manufacturing and metrology requirements.

01 ISO GPS Fundamentals
ISO 8015, tolerance zones, datums and datum reference systems.



02 Geometrical Tolerancing
Form, orientation, position, run-out and maximum material condition (MMC).



03 CAD Drawings
Complex views, ISO GPS dimensioning, 3D annotations and bills of materials (BOM).



04 Numerical Validation
Materials, loads, meshing, von Mises stress and factor of safety.

05 Industrial Project
Apply all acquired skills to a complete technical documentation package.

TARGET AUDIENCE

- Design engineers
- Design office technicians
- Quality professionals
- Manufacturing process planners

PREREQUISITES

- Engineering drawing and blueprint reading
- No prior experience with the chosen softwace required
- Interest in mechanical engineering

YOUR DELIVERABLES

- ✓ Training materials (PDF)
- ✓ CAD templates and weldment profiles
- ✓ ISO GPS reference guide and tolerance aids
- ✓ Final project (3D & 2D files) for your technical portfolio

TRAINING MODALITIES

100% Online (Google Meet) | In-person (Only in Tangier) | Session Recordings Available within 24 Hours | Flexible Schedule (Evenings / Weekends)

Professional Certificate issued by
AMERICAN BOARD®

ENROLL NOW »

OUR CONTACTS IN AFRICA

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