PREPARING FOR THE FUTURE

CPC collaborates with local colleges and universities in developing multilevel certificate and degree programs consisting of advanced composite technologies for post-secondary and undergraduate students.



CPC's training classroom is equipped with:

- Dell Workstations equipped with:
- CATIA v5 CAD/CAM with composite module
- Siemens CAD/CAM (Nastran (FEA)/ANASYS)
- Fibersim Composite Design
- Pro-E Wildfire
- SolidWorks s/w
- Video conferencing & webinars
- Mfg. process equipment networked to enable easy
- up/downloading of programs and of line programming.

Education curriculum and certificate programs: Composite design training courses Composite technician certification program

STEM Education

The STEM High School Composite Technology Program provides an introduction to composite technology designed to give high school students an appreciation for the field of composite design, engineering and manufacturing.



CPC's 25,000 ft² facility is strategically located in Plainview, NY, in close proximity to Long Island's major thoroughfares.



121 Express Street • Plainview, NY 11803 USA

FOR MORE INFORMATION ABOUT CPC

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DESIGN = PROTOTYPE = TEST = TRAIN





WWW.COMPOSITEPRO.ORG

Your Future In Composite Manufacturing



INSPIRING INNOVATION
REALIZING YOUR VISIONS

EVERYTHING YOU NEED TO DESIGN, TEST, PROTOTYPE AND TRAIN



INSIDE OUR WORLD-CLASS, 25,000 FT² MANUFACTURING AND TESTING FACILITY:

Compression Molding Heated Presses (Wabash) • 250 ton, 800°F, Heated Platen 48" x 48", 36" stroke • 100 ton, 800°F, Heated Platen 18" x 18", 36" stroke

Walk-In Oven (Wisconsin) • 6'w x 12'l x 8'h • @ 800°F

Coupon Oven (Wisconsin) • 4' x 4' • @ 1,000°F

Autoclave (Bondtech) • 8' dia. x 20' long • 165 psi & 450°F

• 12 vacuum lines

• N₂ atmosphere

• 24 TCs

Autoclave (Bondtech)

- 5' dia. x 8' long • 300 psi & 800° F
- 6 vacuum lines
- 10 TCs
- N₂ atmosphere

System (APT)

Two 10-gallon,

vacuum/pressure,

batch degassing

and feed tanks

LEADING EDGE TECHNOLOGY

The demand for products utilizing composite materials such as carbon fiber, fiberglass and aramid is growing exponentially. Competing in today's brave new world of Advanced Composite Manufacturing requires vision and expertise as well as a trained workforce. And no center or resource assists in the reengineering of present-day manufacturing methodologies to secure the future more than CPC, the Composite Prototyping Center in Plainview, New York.

Our mission is to enable all organizations to meet the needs of advanced composite manufacturing by providing access to essential training, workforce development, process technologies, prototype manufacturing and testing capabilities.

We offer:

- Full prototype manufacturing
- Hands-on technical training from leading professional materials manufacturing experts
- Workforce development protocols and training
- Fully equipped production line featuring advanced state-of-the-art systems and equipment
- Education and implementation of the latest technologies
- Critical testing capabilities
- R&D support and new composite material evaluation

Design optimization



• Fabricate parts 8 meters long, 5' dia. parts

Thermwood Model 77 CNC 5-Axis Machining Center

- 12 HP HSD Tool Change (3,000-24,000 RPM)
- 60" x 120" Table with 36" Z -Axis
- Impact Resistant 5 Axis Head
- 10 Position Rotary Tool Change System
- Rapid Speed: 3500 inches per minute





- Build Size: 12.60" x 5.20" x 6.30" Layer Resolution: 0.0039"
- Materials: Carbon Fiber,
- Fiberglass, Kevlar®, Nylon



Automated Fiber Placement Machine (Automated Dynamics)

- Manufacture parts up to 90" long by 48" cross section/diameter
- Thermo-set head, $4 \frac{1}{4}$ " tows
- Thermo-plastic head, 1 0.25"/0.50"
- tape, laser in-situ consolidation
- Flat panel capable (48" x 96")

RTM/VARTM Resin Injection/Infusion

• Equipped to process two component epoxy composite



CLEAN ROOM Single Ply Auto Cutter/ (Gerber/Virtek) Laser Projection System

- 1,200 ft², Class 100,000
- Hand layout & vacuum
- bagging tables Laser projection system aids in the following operations:
 - Nesting, picking, kitting and lay up of plies

TEST/INSPECTION LAB

- Universal Test Machine (Instron)
- Impact tester (Instron)
- Digital microscope
- Non-Destructive Inspection Equipment (Olympus)
- CMM (Faro Arm)
- Periometer Bond Tester (Perimetrics)

3D Printing System (Stratasvs)

- Rapid prototyping
- Tool manufacturing direct from CAD files
- Fast turnaround samples
- Uses ABS-ESD7, ULTEM 9085, PC-ABS, PC-Model with SR-100 soluble support material, PPSF, PC-ISO, ABS-M30i, ABSi, Nylon 12

Markforged Mark-One Composite 3D Printer