



SERVICES OFFERED IN:

English and French



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CTA is a college centre specializing in applied research and technology transfer, affiliated with Cégep Édouard-Montpetit. CTA's mission is to support the aerospace industry and provide customers and partners, mainly SMEs, with applied research services to increase their knowledge, productivity and competitiveness, and the quality of their products, processes and services.

AREAS OF INNOVATION EXPERTISE

- Aeronautics
- Composites
- Inspection (metal and composites) - NDT
- Transportation
- Machining
- Robotization

Affiliated with Cégep Édouard-Montpetit

TECHNICAL AND BUSINESS SERVICES

- Components/parts fabrication
- Concept ideation & design review
- Customized machining (including laser machining)
- Design Services
- Early-Stage Business Development
- Fabrication, Prototyping and Installation Services
- Facilitation service (introduction)
- Field trials/Simulation
- Ingredient selection and recommendations
- Non-destructive inspection (NDI)
- Performance Monitoring and Management
- Proof of concept
- Rapid prototyping / 3D printing
- Regulatory guidance
- Scientific report writing
- Technical assistance (consultation, comparative analysis of technologies, tests and analysis)
- Technology Validation and Transfer
- Provincial and federal grant proposal development

APPLIED RESEARCH AND DEVELOPMENT

- 3D Scanning
- Coaching
- Composite tooling design and manufacturing
- Concept validation
- Design of Experiment
- Laboratory/industrial/pilot scale prototyping
- Non-destructive inspection
- Performance monitoring and analysis
- Provincial and federal grant proposal development
- Regulatory guidance
- Report preparation on R&D results
- Reverse Engineering
- Robotics and automation and imaging

TRAINING

- Composite Parts Manufacturing Processes
- Corporate on-site & in-house training
- Curriculum development
- Design, development, and delivery of customized training
- Interactive Workshop Sessions
- Needs assessment and gap analysis
- Skills assessment/Competency evaluation
- Train the trainer

TECHNOLOGY DIFFUSION

- Customized technology demonstrations
- Field site product demonstration
- Industry-specific events & symposia

- Literature review
- Networking events
- Open houses - Testing facility & personnel
- Participation at trade shows & other venues
- Presentation of results at conferences
- Publishing in Peer Reviewed Literature
- Rental of space & equipment
- Seminars and Workshops
- Technical publications

INVENTORY OF SPECIALIZED EQUIPMENT

- Halt & Hass laboratory
- Laboratory for Composite Development
 - Molding press 400 tons - 200 ° C - 3x2.5 m
 - Molding press 150 tons - 800 ° C - .7x.7 m
 - Oven AMS2750E Type 1 Class A - 260 ° C - 3x2.5 m
 - Casting autoclave 14 bar - 400 ° C - .6x1.2 m
 - Automated cutting table
 - Sample cutting machine, polisher and microscope 2500x
 - Projection laser for rolling
 - Fatigue test system 100 kN
 - Automated Injection Piston 14 bar - 200 ° C - 6 L
 - Portable laminating room with controlled environment
 - Large-format 3D Plastic Engineering Printer
 - Electrical or water temperature control systems.
 - Keyence VHX-2000E Digital Microscope
- Non-destructive testing laboratory
 - Conventional Ultrasound
 - Phased-array Ultrasound
 - 5-axis automated inspection tank
 - Active Infrared Thermography
 - Robotic Thermography
 - Bond-Tester
 - Shearography
 - Advanced analysis software
- Robotics laboratory
 - Robots KUKA KR 500-F-MT, KUKA KR 300, R2500 ultra, Fanuc M-710iC / 50S, Fanuc M710iC / 70
 - PRO CMM Optical Tracker from NDI
 - CREAFORM system
 - ABB IRB140 and ABB IRB4600
 - C-Track: stereoscopic camera
 - Handy probe
- Metrology laboratory
 - Mitutoyo CMM 3-D measuring machine
- Machining laboratory
 - Makino a81M 5-axis machining centre for titanium, Inconel and Waspaloy®
 - Mori Seiki NT 4200/1500 SZ machining and turning centre
 - Huron K2X8 5-axis machining centre