



SERVICES OFFERED IN:

English



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Affiliated with Lambton College

Bluewater Technology Access Centre (BTAC), is a specialized research and development centre that collaborates with Canadian businesses (specifically small and medium-sized enterprises – SMEs) through contract or grant funded projects to advance products, processes, technologies and services. BTAC's areas of expertise are advanced manufacturing and 3D printing. BTAC services include engineering design, prototyping, reverse engineering, metrology, process improvement, and product development and testing, as well as market analysis, technology transfer and commercialization consulting.

AREAS OF INNOVATION EXPERTISE

- Additive manufacturing (laser sintering and fused deposition modeling) including printing prototypes and end use parts
- Precision metrology (including reverse engineering, inspection, and alignment) with portable metrology equipment
- Manufacturing process design and improvement
- Advanced materials engineering
- Process design, control and optimization
- Fire exposure and heat testing (largest site in Canada)



TECHNICAL AND BUSINESS SERVICES

- Business Mentorship referrals
- Commercialization referrals
- Competitive assessments
- Concept ideation & design review
- Consumer focus groups

- Fabrication, Prototyping and Installation Services
- Facilitation service (introduction)
- Field trials/simulation
- Ingredient selection and recommendations
- IP Protection facilitation
- Literature reviews
- Marketing Advisory Services referrals
- Performance Monitoring and Management
- Project management
- Proof of concept
- Sample analysis & testing
- Scientific and technological monitoring

APPLIED RESEARCH AND DEVELOPMENT

- 3D design & rapid prototyping
- Composite manufacturing
- Design of Experiment
- Human Factors Studies
- Industrial scale prototyping
- Laboratory/pilot scale prototyping
- Manufacturing process design and development
- Measurement inspection and alignment
- Performance monitoring and analysis
- Pre-commercialization
- Provincial and federal grant proposal development
- Report preparation on R&D results
- Robotics and automation and imaging
- Technology transfer
- Technology validation

TRAINING

- Connections to co-op placement opportunities
- Corporate on-site & in-house training
- Curriculum development
- Design and delivery of customized training
- Needs assessment and gap analysis
- Skills assessment/Competency evaluation

TECHNOLOGY DIFFUSION

- Customized technology demonstrations
- Field site product demonstration
- Industry-specific events & symposia
- Networking events
- Open houses - Testing facility & personnel
- Presentation of results at conferences
- Publishing in Peer Reviewed Literature
- Rental of space & equipment
- Seminars and Workshops

INVENTORY OF SPECIALIZED EQUIPMENT

- Advanced Manufacturing & 3D Printing Lab
 - Additive Manufacturing EOS Formiga P110 SLS 3D

- Printer (selective laser sintering)
- Additive Manufacturing Stratasys uPrint SE Plus 3D Printer (fused deposition modeling)
- Additive Manufacturing UP 3D Printer
- FARO Edge Arm, FARO Laser Line HD Scanner, and FARO Vantage Laser Tracker with Track Arm
- Advanced Material Processing Lab
 - Xplore Micro Compounder
 - Leistritz Twin Screw Extruder, pilot scale
 - Kawaguchi KM 50 Injection Molder
 - PHI Press
- Advanced Material Testing Lab
 - Scanning Electron Microscopy (SEM) with associated Energy-dispersive X-Ray (EDX) SEM - HITACHI S-3700N Variable Pressure SEM with EDX
 - Atomic Force Microscopy (AFM)
 - Thermal Analysis Units (DSC-TGA)
 - Scanning Electrochemical Microscopy (SECM)
 - Advanced Goniometer/Tensiometer
- Electrochemical and Nano Material Lab
 - Mercury Intrusion Porosimeter
 - 3 AUTOLAB Potentiostat/Galvanostat
 - Princeton Applied Research Potentiostat/Galvanostat (models 263 and 283)
 - Rigaku, Miniflex 600 X-Ray Diffractometer
 - Battery Analyzer BA420
 - Nuvant, Ezlab Fuel Cell Test Station
 - Electrochem, MTSA-NL Fuel Cell Test Station
 - Shimadzu, GC2014 Gas Chromatograph
- Bioanalytical Lab
 - KOEHLER Cloud/Pour Point Tester, Standards & Constant Temp. Utility Bath, Flash Point Tester, KV 3000 viscosity bath and viscometers, and Automated Ash Fusion System
 - Parr 1271 Unit with Bomb Calorimeter, Controller and Water handling system
 - Leco CHN-1000
 - Potentiometric Automatic Titrator AT-500N & Bomb Calorimeter
- Hydrogen Lab
 - GC600 Hydrogen Generator (Electrolyser), Proton Energy Systems
 - HOGEN S10 Hydrogen Generator (Electrolyser), Proton Energy Systems
 - NEXA 1200 PEM Fuel Cell, Helicentris
- Water Analysis Lab
 - High-Performance Liquid Chromatography (HPLC)
 - (ICP) Inductively Coupled Plasma
 - NEOMET (itek®) Multi Meter P DC-700L
 - Phipps & Bird Inc. Floc Illuminator Jar Tester
 - Optic IvyMen System 2100-C
 - Pharmacia Biotech Ultrospec 3000 UV-Visible Spectrophotometer