

Dalhousie University

Overview

Dalhousie University, founded in 1818 in Nova Scotia, has been delivering exceptional education for almost 200 years. Dalhousie University is a member to the U15 Group of Canadian Research Universities it is well distinguished by its world-class research. Home to 51 Canadian Research Chairs and over 180 projects approved by the Canada Foundation for Innovation, Dalhousie University is often gaining international recognition for research. The Industry Liaison and Innovation manages and facilitates collaborations between companies and the University's researchers, commercializes research and assists in the creation of spin-off ventures.

Research Capabilities

Multi-Faculty Centre

- Atlantic Health Promotion Research Centre (AHPRC)
 - Health services and health systems
 - Youth obesity and the built environment
 - Healthy eating and physical activity
 - Knowledge translation
 - Oral health of seniors
 - Employment related mobility
 - Health of vulnerable populations
 - Harm reduction
 - Chronic disease prevention
 - Food security
- Brain Repair Centre (QEII Health Sciences Centre)
 - Proteomics
 - FACS Aria III flow cytometry
 - Laser confocal microscopy
 - Laser micro-dissection microscopy
- Centre for Comparative Genomics & Evolutionary Bioinformatics
 - Genes & genomes, phylogenetics
 - Biochemistry, molecular modeling, cell evolution
 - Protistology
 - Statistics
- Health Law Institute
 - End of life treatment
 - Patient Safety
 - Privacy and confidentiality of health information

- Collaborative Self-Regulation
- Institute for Research in Materials
 - High-field solid-state NMR spectrometer
 - Scanning electron microscope
 - Focused ion beam
 - X-ray photoelectron spectrometer
 - Scanning thermal microscope
 - GrindoSonic
 - Hot press
 - Motion recorder/analyzer
 - FT Raman Spectrometer
 - Differential scanning calorimeter
- Neuroscience Institute
 - Brain Function
 - Neurological models and assessment of cognition
 - Neuroimaging Research Lab
 - 4T magnetic resonance imaging system
 - 64 channel electroencephalograph
 - Transcranial magnetic stimulation device
 - Biomedical MRI Research Lab
 - 3T MRI and &T micro manager
 - Clinical Magnetoencephalography (MEG) Lab
 - 306 channel whole-head MEG
 - 64 channel EEG system

Engineering

- Canadian Institute of Fisheries Technology (CIFT)
 - fats and oils laboratory
 - food chemistry laboratory
 - food development laboratory
 - sensory evaluation laboratory
 - food process engineering pilot plant
 - low temperature storage facility
 - food physical properties laboratory
 - food microbiology laboratory
 - Specialized lab equipment
 - automated high performance and fast protein liquid chromatography systems
 - gas chromatography/mass spectroscopy system, preparative ultracentrifuge
 - multi-purpose refrigerated centrifuge, microtube centrifuge
 - analytical and preparative electrophoretic/isoelectric focusing equipment
 - pulsed field electrophoresis system
 - thermocycler
 - DNA gel electrophoresis, Hoefer Daltsix for 2D electrophoresis, Image Master 2D elite software, capillary electrophoresis system

- ultra-low temperature freezer
- universal texture testing machine, various colorimeters
- U.V. and visible spectrophotometer, spectrofluorometer
- electrokinetic analyzer
- workstation for mathematical modelling and computer simulation
- Linkham shearing stage/microscope
- Nikon microscope (various attachments)
- controlled stress rheometer with a high temperature/pressure attachment
- controlled rate rheometer, Viscomat, and a rolling ball viscometer
- Centre for Water Resources Studies (CWRS)
 - Clean Water Lab Physical
 - Chemistry, particle microbiological properties of water(drinking water, waste water and industrial effluents)
 - Membrane and coagulation treatment at bench scale
 - Analytical chemistry lab
 - Pilot Water Treatment Plant
 - Understand and ultimately optimize treatment practices
 - Three rapid mix tanks, up to 6 chemical injections
 - Three flocculation tanks
 - Sedimentation Tank with adjustable plates (possibility to by pass)
 - Dual media filters
 - Testing of coagulants, mixing energies, filter backwash, detention times, filtration rate, pH, temperature, turbidity, particle counts at critical points
 - Northern Water Quality Lab (Iqaluit, Nunavut)
 - pH, Dissolved Oxygen, conductivity
 - Carbonaceous Biochemical Oxygen Demand (CBOD)
 - Solids Analysis - Suspended, Dissolved, Volatile, Fixed
 - E. coli and total coliforms through Colilert processes
 - Nutrients (ammonia, nitrate, total nitrogen, total phosphorus)
 - Turbidity
 - Free and Total Chlorine
 - UV254
 - On-site Wastewater Research Facility (Bible Hill, NS)
 - Long term controlled field studies
 - 8 lateral flow sand filters with a variety of different slopes and sand types
 - 2 contour trench systems
 - 4 peat filters
 - 2 surface flow constructed wetland system
 - Environmental Hydrology Lab
 - Field Equipment:
 - Sontek Acoustic Doppler Velocity Meter
 - Both Pygmy and Price Type Current Meters
 - 4 HOBO Weather Stations
 - HOBO Water Levels Loggers

- 8 ISCO Autosamplers
 - 4 Dipper T Water Level Sensors
 - 6 YSI Multiparameter Sondes with sensors for temperature, dissolved oxygen, pH, conductivity, turbidity, chlorophyll, and rhodamine
 - 2 Handheld YSI sondes with sensors for temperature, dissolved oxygen, pH, conductivity
 - Real-Time Kinematic GPS system
 - Lab Equipment
 - Biorad QPCR System
 - DIONEX Ion-Chromatography System
 - LISST Particle Sizer
 - Micro-centrifuge
 - Digital Water and Several Incubators
- Minerals Engineering Centre (MEC)
 - Processes and technical evaluation for recovery of minerals
 - Documented and regularly updated mining library
 - Labs
 - Rock mechanics, numerical modeling, rock sample preparation and rock testing
 - Subsurface imaging
 - Non-destructive testing
 - Mine tailings and waste treatment
 - Mineral processing
 - Mining geology
 - Mining computer laboratory
 - Digitizing tables and software for mine planning, ore body modeling, geotechnical design and reservoir modeling
 - Mineral Processing Equipment
 - Jaw, roll, crushers (top size 30 cm)
 - Hammermill
 - Szego mill
 - Pulverizers
 - Ball/rod mills
 - Screens (gilson, ro-tap, dillon)
 - Mozley classifier
 - Gravity equipment (tables, jigs, Humphrey and Reichert Mark 7 spirals, 12" Knelson, superpanner)
 - Bench and pilot plant flotation cells
 - Conditioners
 - Thickeners spiral classifier
 - Vat and heap cyanidation facility (10'x4' agglomeration drum, 15' high x 4", 1', 2' & 3' cyanidation columns, 65 TPD Merrill-Crowe zinc precipitation unit)

- Magnetic separators (Sala drum, Frantz Isodynamic, Eriez Hi-Intensity, Carpco and Boxmag-Rapid)
 - Analytical Equipment
 - Atomic absorption spectrometer
 - 3.4 meter Ebert spectorgraph
 - Leco sulfur and carbon system
 - Stereopycnometer
 - Malvern particle sizer
 - Mercury analyzer
 - Scanning electron microscope
 - Thin section equipment
- Centre for Innovation in Infrastructure
 - Structural Analysis and Design
 - Structural Health monitoring
 - Bridge engineering and innovations
 - Soil-steel structures
 - Fibre reinforced polymers
 - Fibre reinforced concrete
 - NDT of bridge decks and pavements
 - Sustainable asphalt technology
 - The Heavy Structures Lab
 - large-scale loading equipment used for testing prototype scale bridges and other large structural components.
 - State-of-the art Materials Testing Laboratories
 - 200 Ton Tinius Olsen testing machine
 - 200 Ton Amsler servo hydraulic column testing machine
 - 100 KN, 200KN and 250 KN Instron servo- hydraulic universal testing machine
 - Instrumented drop weight and Charpy impact testing facility
 - Geotechnical Testing Laboratories with a variety of testing machines and data acquisition facilities
 - Petroleum Engineering laboratory with state-of-the-art equipment, including:
 - Computer controlled high-pressure triaxial stress analyzer
 - Corrosion chamber for analysis of the effects of harsh environmental conditions
 - Laser interferometer for measuring temperature, pressure and concentration in 3-D systems
 - Screening device for hydrate inhibitors
 - Highway Materials Testing laboratories.
 - Hydraulic modeling laboratory.
- Vehicle Safety Research Team (VSRT) (no information available)

Medicine

- Atlantic Research Centre
- Gamma Cell

- Animal Care
- Cellular & Molecular Digital Imaging
 - Laser Scanning Confocal Microscope
- Proteomics
 - DalGEN proteomics facility
 - Protein identification and analysis service
 - a QTRAP liquid chromatograph-mass spectrometer system
 - robotic gel digester
 - two PC workstations for data analysis
- Maritime Brain Tissue Bank
 - Collection of Brain Tissues for researchers of dementia
- Enhanced Gene Analysis & Discovery
 - Canada's only RNAi library
- Flow Cytometry
 - BD FACSCalibur™ platform
- Zebrafish
- Multi-photon facility
- Research data & systems management

Science

- Nuclear Magnetic Resonance Research Resource
 - High-Resolution NMR Spectrometers
 - Solid-State NMR Spectrometers
 - Supplemental Tools
 - Equipment
 - Bruker AC-250 (Tecmag upgrade)
 - Avance 300 and Avance 500 NMR spectrometers for liquids
 - Bruker Avance DSX 400 and Avance 700 NMR spectrometers for solids
 - Bruker Avance III 700 NMR spectrometer with cryoprobe capabilities for liquids experiments
- Trace Analysis Research Centre (TARC)
 - Spectroscopy
 - Chromatography
 - Mass spectrometry
 - Electrochemistry
 - Nuclear analytical chemistry

Law

- Law and Technology Institute
 - Canadian Journal of Law & Technology
 - IT.CAN Newsletter
- Marine & Environmental Law Institute
 - Arctic governance
 - Canadian, comparative and international Maritime law & policy

- Canadian environmental law & policy
- Climate change and energy law & policy
- Coastal law, policy & management
- International environmental law & governance
- International law of the sea

Management

- Centre for International Trade and Transportation
 - High-seas piracy
 - Produce food more efficiently
 - Local Economic Growth and Food Security in Cuba
 - Critical infrastructure
 - How critical sectors can reduce occurrence of major risk events
 - Natural disasters
 - Industrial failures
 - Food contamination
 - Cyber security
 - Pandemics
 - Supply chain modelling
 - Terrorist plots
 - Risk discussion in twitter
 - Health communication and social media
 - Immersive technology as a tool for information sharing
 - Entrepreneurial small business
 - Effects of lagoon contamination on health of residents
- Norman Newman Centre for Entrepreneurship
- School of Information Management
 - Social Media Lab
 - Social Media, Social Networks Analysis, Online Social Networks
 - Online Communities
 - Text Mining
 - Information Visualization
 - Computer-Mediated Communication
- Rowe School of Business
 - Risk Lab
 - Financial and risk management
 - Software, data bases and Bloomberg terminals
 - Behavioural Research Lab
 - Usability Lab
 - Eye-tracker
 - Workgroup Lab
 - Accommodates 16 ppl

- Focus groups
 - Behavioural studies at laptops
- Observation Lab
 - Data collection equipment
 - DVD equipment
 - Casting equipment (video to storable format)
 - Workgroup and Usability lab viewing
- School of Resource and Environmental Studies
 - Biodiversity conservation
 - Ecosystem services
 - Energy systems
 - Food sustainability
 - Freshwater and marine systems
 - Health and environmental justice
 - Indigenous perspectives
 - Industrial sustainability
 - Policy and public engagement
 - Sustainable forest management
 - Urban & regional issues
- School of Public Administration
 - Local Economic Growth and Food Security in Cuba
 - The Critical Infrastructure Protection Initiative
 - Understanding and Responding to Terrorist Threats
 - Population Decline
 - E-Government and Democracy
 - Population Challenges in Rural Atlantic Canada
- NS Health Policy Research Centre
 - Medical research (clinical and epidemiological investigations)
 - Health policy research
 - Health outcomes research
 - Health services research

Arts and Social Sciences

- Humanities
- Social sciences
- Performing arts
- Atlantic Institute of Criminology
 - Critical Health Studies
 - Economy, Work and Development
 - Social Justice and Inequality
- Centre for African Studies
- Centre for Foreign Policy Studies

- Maritime security policy
- Foreign and domestic security
- Global security policy
- Centre for European Studies (The European Union Centre of Excellence—EUCE)
 - Health care delivery
 - Environmental and energy security
 - International trade
 - Connection between migration and security
- Institute for Society and Culture

Contact

General Enquiry

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