PROGRAMS AND WORK TERM SKILLS & ABILITIES OF OUR STUDENTS
INSTITUTE FOR CO-OPERATIVE EDUCATION
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JOHN MOLSON SCHOOL OF BUSINESS

Accountancy

Programs with related responsibilities include: Economics, Finance, Mathematics, Statistics
• Bookkeeping
• Accounts payable and receivable
• Cost accounting
• Internal and external audits
• Taxation of Canadian Non-residents
• Sales tax reporting
• Internal control design and testing
• Financial statements
• Personal and corporate tax files

Finance

Programs with related responsibilities include: Accountancy, Economics, International Business, Mathematics, MBA, Statistics
• Real estate investments and analysis
• Capital structure and leverage analysis
• Capital budgeting analysis
• Bond and stock valuations
• Options and Futures & Foreign exchange
• Capital asset pricing model / Arbitrage model
• Mergers & Acquisitions
• Portfolio Investment Analysis / Portfolio Management
• Working capital management

Human Resource Management

Programs with related responsibilities include: Anthropology, International Business, MBA, Sociology
• Recruitment, selection and onboarding
• Survey design, best practices and pay equity
• Training and development
• Compensation and benefits
• Industrial relations
• Designing job descriptions
• Talent and change management
• Strategic human resource practices
• Performance management

Supply Chain Operations Management

Programs with related responsibilities include: Finance, Industrial Engineering, Mathematics, MBA, Mechanical Engineering, Physics, Statistics
• Development of project milestone deliverables
• Production operations management
• Procurement
• Process controls and improvements
• Forecasting + demand planning
• Supply Chain Analytics
• Supply Chain Risk Management
• Logistics
• Supply Chain Control and materials Planning

International Business

Programs with related responsibilities include: Anthropology, Economics, Finance, Marketing, MBA, Political Science, Statistics, Sociology
• International market research and analysis
• International communication and relations
• Global social media
• Verbal and written translations
• Implications and repercussions of international policy change
• Audits of international standards procedures and implementation

Business Technology Management

Programs with related responsibilities include: Computer Engineering, Computer Science, MASc Information Systems Security Software Engineering, MASc Quality Systems Engineering, MBA
• Designing and developing database systems
• Management of IT projects
• IT Audits
• Database management
• Information Systems Risk Management
• IT strategic planning and technological transformation
• Defining IS for R & D documentation
• ERP Systems Implementation and Analysis
• Business Systems Analysis

Marketing

Programs with related responsibilities include: Anthropology, Computation Arts, Design, Economics, International Business, Journalism, Mathematics, MBA, Sociology, Statistics
• Digital and social media campaign creation
• Marketing research (qualitative / quantitative)
• Event and trade show planning
• Copywriting for online and offline applications
• Product management / Sales support
• Public relations planning and execution
• Presentation design and production
• Managing internal communication programs
• Market analysis

Master’s in Business Administration (MBA)

• Full cycle project and product management
• Surveying, statistics and data analysis
Market trends and key growth strategies and analysis
Operations management and value stream mapping
Feasibility studies and develop business plans
Market entry strategies / customer journey mapping
Financial reporting and decision making
IT sourcing strategies and implementation
Develop marketing and communications plans

FACULTY OF ARTS & SCIENCE
AND FACULTY OF FINE ARTS

Actuarial Mathematics/Finance
Programs with related responsibilities include: Economics, Finance, Mathematics, MBA, Statistics
• Mathematical modeling
• Analysis and risk control
• Financial and statistical analysis
• Pension management
• Insurance products
• Actuarial consulting
• Health benefits planning and calculations
• Theory and programming languages

Actuarial Mathematics
Programs with related responsibilities include: Economics, Finance, Mathematics, Statistics
• Specialized knowledge in calculus, statistics and probability
• Evaluating insurance products
• Pension plans and risk management
• Statistical analysis
• Database manipulation
• Programming in SAS, VBA, R
• Pricing (re-) insurance products
• Modeling distributions

Mathematics
Programs with related responsibilities include: Computer Engineering, Computer Science, Economics, Electrical Engineering, Finance, MASc Information Systems Security, MASc Quality Systems Engineering, MBA, Physics, Software Engineering, Statistics
• Industry and market statistics and analysis
• Developing databases
• Investment and data analysis
• Cryptography
• Analysis of statistics
• Testing survey hypotheses
• Manipulating algorithms
• Computer hardware, software development and testing

Mathematical Computational Finance
Programs with related responsibilities include: Actuarial Mathematics/Finance, Computer Engineering, Computer Science, Economics, Finance, MBA, Statistics
• Financial engineering
• Quantitative modelling and risk management
• Portfolio management
• Investment trading
• Algorithmic and high frequency trading
• Investment and data analysis

Statistics
Programs with related responsibilities include: Actuarial Mathematics, Economics, Marketing, Mathematics, MBA, Physics, Political Science, Sociology
• Biostatistics
• Collection, Analysis and Interpretation of Data
• Development & planning of business and market strategies
• Hypothesis testing, forecasting and predicting
• Management of investment portfolios
• Survey analysis
• Software development
• Shaping of public policy in government

Biology
Programs with related responsibilities include: Biochemistry and Chemistry
• Microbiology/virology assays, bacteria/viral culture and counting
• Characterize the effects of drug candidates in cells and/or in animals
• Bacteria or blood smear preparations and staining
• ELIZA, DNA cloning, plasmid isolation, PCR, sequencing
• Field assistant, species identification, measurement and counting
• Collecting biological and/or soil samples/information
• Museum specimen curation and biological data curation

Biochemistry
Programs with related responsibilities include: Biology, Building Engineering, Chemistry, Civil Engineering, MASc Quality Systems Engineering, Physics
• Laboratory and instrumentation training
• Analysis of protein structure and transitions
• Detecting biomolecular interaction
• Extracting, purifying and quantitating metabolites in biological samples
• Calorimetry, circular dichroism, DNA denaturation
• Designing purification devices and protein purification
• Investigating DNA cloning
• Cell culture, receptor and enzyme assays
• Quality Control, Quality Assurance, Regulatory Affairs

Chemistry
Programs with related responsibilities include: Biochemistry, Biology, MASc Quality Systems Engineering, Physics
• Laboratory and instrumentation training
• Synthesis, purification and characterization of organic and inorganic compounds
• NMR, IR, GC, GC-MS basics
• Wet analytical chemistry methods
• Kinetic analysis via spectroscopic techniques
• Quality Control, Quality Assurance, and Regulatory Affairs
• Environmental chemistry analysis
Economics and MA Economics
Programs with related responsibilities include: Actuarial Mathematics/Finance, Anthropology, Finance, Mathematics, MBA, Political Science, Sociology, Statistics and Supply Chain Management
• Analysis of income and production
• Analysis and interpretation of numerical and financial information
• Investment analysis
• Analysis of taxes and government expenditures
• Econometrics
• Study of labour
• Qualitative and quantitative analyses
• Interpretation of survey data

Journalism
Programs with related responsibilities include: Anthropology, Computation Arts, Design, International Business Marketing, Political Science, Sociology
• Story chasing and news reporting
• Anchor and broadcast media
• Social media and blog management
• Digital/Web content production
• Public relations
• Corporate communications
• Recording and editing audio/video
• Event production and planning
• Photography, InDesign and Photoshop

Physics
• Quantitative data analysis
• Numerical and theoretical modeling
• Electronics and computer engineering software/hardware
• Modeling development in lasers and optics
• Image processing and medical imaging modeling
• Micro/Nano fabrication
• Fabrication of organic solar cells,
• Quantitative biology and modeling chemical reactions
• Astro Physics

Translation (English and French)
• Commercial, legal, financial, technical, literary, video games, subtitling and social sciences translation
• Annual reports, speeches, press releases, memos and reports, catalogues, training guides and newsletter documents
• Project management and website localization
• Creation and management of terminology records

Political Science
Programs with related responsibilities include: Anthropology, Economics, Human Resources, International Business, Journalism, Marketing, Mathematics, Sociology, Statistics
• Public policy evaluation and research (local or international)
• Government or business organizational policies and procedures
• Economic and statistical analysis
• Legal matters and regulatory documentation
• Business reports, administration, and presentations
• Event and project coordination
• Public relations and corporate communications
• Corporate Social Responsibility
• Human Rights, advocacy and critical analysis
Sociology/Anthropology
Programs with related responsibilities include: Anthropology, Economics, Human Resources, International Business, Journalism, Marketing, Mathematics, MBA, Political Science, Statistics
- Statistics, economics and data management
- Public opinion tracking and market analysis
- Behavioral analysis for marketing of products/services
- Human resource policies
- Corporate Social Responsibility
- Customer or public relations
- Internal and external communications
- Human rights
- Museums and Cultural Affairs
- Local community advocacy

Computation Arts
Programs with related responsibilities include: Computer Engineering, Computer Science, Design Arts, Journalism, Software Engineering
- Web project design and development
- Multimedia project design and development
- Videogame design and development
- 3D modelling and animation
- Sound and video editing
- User interface and interaction design
- Digital media landscape assessment

Design
Programs with related responsibilities include: Building Engineering, Computation Arts, Industrial Engineering, Journalism, Marketing, Mechanical Engineering
- Print layout and design
- Website structuring
- Product conceptualization for branding strategies
- Photography and digital illustration
- 2D and 3D design
- Public space design
- Sustainability-oriented design
- Video editing and animation

Building Engineering
Programs with related responsibilities include: Civil Engineering, Computation Arts, Design, Electrical Engineering, Industrial Engineering, Mechanical engineering, Physics
- Producing AutoCAD drawings
- Site visits and inspections
- Project Management
- Building inspections
- Energy audit of buildings
- Preparing plans for HVAC systems
- Preparing plans for electrical systems
- Engineering surveying

Civil Engineering
Programs with related responsibilities include: Biochemistry, Biology, Building Engineering, Computation Arts, Design, Electrical Engineering, Mechanical Engineering, Physics
- Geometric and pavement design of roads
- Civil Infrastructure design
- Engineering surveying
- Assessing buildings equipment and systems
- Geotechnical site investigation
- Project Management
- Inspecting construction sites
- Environmental assessments

Computer Engineering
Programs with related responsibilities include: Computation Arts, Computer Science, Electrical Engineering, MASc Information Systems Security, MASc Quality Systems Engineering, Physics, Software Engineering
- Software systems requirements, design, implementation and testing
- Hardware design, testing and implementation.
- Developing real-time embedded systems
- Developing telecom and communication network systems
- Data structure and algorithms
- Computer Architecture and Design

Electrical Engineering
Programs with related responsibilities include: Computer Engineering, Computer Science, Physics, Software Engineering
- Designing, testing, and integrating telecom solutions
- Analyzing, designing, and verifying integrated circuits
- Developing Power and Renewable Energy Systems
- Developing robotic and avionics systems

*Graduate students also available
Industrial Engineering

Programs with related responsibilities include: Aerospace Engineering, Building Engineering, Business Technology Management, Civil Engineering, MBA, Mechanical Engineering, Physics, Supply Chain Operations Management

- Production and operations planning
- Process improvement and re-engineering
- Designing plant layout
- Logistics planning and optimization
- Lean Six Sigma
- Inventory optimization and forecasting
- Simulation and optimization of business processes
- Performing ergonomic evaluations
- Capacity and backlog analysis

Mechanical Engineering

Programs with related responsibilities include: Aerospace Engineering, Building Engineering, Business Technology Management, Industrial Engineering, MBA, Physics, Supply Chain Operations Management

- Creating and reviewing mechanical and technical drawings
- Production and operations engineering
- Designing mechanical parts
- Researching on composites for aircraft
- Assembling a pipeline
- Preparing specimens for testing and analyzing the results
- Project Management

Software Engineering

Programs with related responsibilities include: Computation Art, Computer Engineering, Computer Science, Electrical Engineering, MASc Information Systems Security, MASc Quality Systems Engineering, Physics

- Analyzing, designing, implementing and maintaining systems
- Analyzing and developing computer solutions
- Provide technical support
- Developing, programming, designing, coding and testing
- Planning and implementing computer security systems
- Design, implement and evaluate user interfaces
- Developing real-time control and data acquisition systems
- Windows, Linux, Oracle, Java and C++
- Project management

Computer Science

Programs with related responsibilities include: Computation Art, Computer Engineering, Electrical Engineering, MASc Information Systems Security, Mathematics, MASc Quality Systems Engineering, Physics, Software Engineering

- Windows, Linux, Oracle, Java and C++
- Providing technical support
- Analyzing and developing computer solutions
- Creating, designing, modifying, and testing software
- Planning and implementing computer security systems for database access control
- Creating web pages

MASc Quality Systems Engineering

Programs with related responsibilities include: Computer Engineering, Computer Science, Industrial Engineering, MASc Information Systems Security, MBA, Mechanical Engineering, Physics, Software Engineering, Supply Chain Operations Management

- Planning, developing, testing, implementing, monitoring, maintaining and improving systems
- Systems reliability and process re-engineering
- Quality assurance
- Project management
- Developing DB 2 Kernel
- Analysis of quality systems and supply chain operations management

MASc Information Systems Security

Programs with related responsibilities include: Actuarial Mathematics, Computer Engineering, Computer Science, MASc Information Systems Security, MBA, Physics, Software Engineering

- Research, development and documentation of projects
- Developing secure protocols
- Developing secure applications
- Systems Hardening
- Cloud security
- Software development
- Bugs and malware analysis
- Big data analysis and verifications

For more information
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