MASTER OF SCIENCE
Computing & Data Analytics

2018

Faculty of Science
Saint Mary's University
923 Robie Street
Halifax, Nova Scotia B3H 3C3
902.491.6535
msc.cda@smu.ca

smu.ca/mscda

SAINT MARY'S UNIVERSITY SINCE 1802

FACULTY OF SCIENCE

Learn. Generate. Innovate.

Meet the Demands of Big Data

The Master of Science in Computing and Data Analytics at Saint Mary's is a 16-month professional graduate program designed to teach in-demand skills to meet the complex challenges associated with Big Data. The program combines two essential aspects of computing and data analytics:

- Software design, development, customization, and management;
- Data analytics and business intelligence: the acquisition, storage, management, and analysis of huge amounts of data to improve decision making, solve real world problems, and drive innovation.

M.Sc. CDA graduates emerge with the cutting-edge skills to excel as data scientists, business analysts, IT managers, strategists, entrepreneurs, and programmers of business computing solutions.

Career Path: Your Link to Industry

The primary focus of the M.Sc. CDA program is to develop highly qualified computing and data analytics professionals who will drive innovation and organizational success. M.Sc. CDA prepares students for rewarding and lucrative careers in the data science industry through experiential learning opportunities and industry interaction.

M.Sc. CDA is a registered education provider for the Certified Analytics Professional designation. CAP is managed by the Institute for Operations Research and the Management Sciences, the largest professional society in the field of operations research, management science, and analytics. Graduates will have fulfilled the education requirements for CAP credential and are prepared to write the qualifying exam.

The 2016-17 cohort had a 100% success rate in finding paid internships and projects in their field. Students are employed with IBM, Royal Bank of Canada, Bell Canada, Unisys, CGI and other international companies.

Faculty and Industry Experts

M.Sc. CDA students benefit from the expertise of award-winning faculty from Saint Mary's Faculty of Science and the Sobey School of Business, the only business school in Atlantic Canada with AACSB accreditation. Fewer than 5% of the world's 13,000 business programs have earned AACSB, the highest worldwide standard of achievement for business schools.

Experts in their fields, our instructors are actively involved in research and development activities in data analytics. These industry interactions help M.Sc. CDA students exponentially grow their professional networks and gain experience solving real-world business problems. All students are also matched with a mentor who provides coaching and networking support.

Experiential Learning

M.Sc. CDA organizes several industry sponsored appathons and hackathons that foster teamwork and project management skills and provide non-traditional learning opportunities for students. Students enrich their portfolios by designing and developing innovative data-driven applications and liaise directly with industry judges. The program also provides opportunities for students to attend conferences and industry-led workshops. For example, M.Sc. CDA is sending two teams to Toronto to compete in RBC Financial Group's "Next Great Innovator" Hackathon in September 2017.

Through special guest lectures and structured, industry-mentor programs available to all students, M.Sc. CDA's cohort structure offers an enriched learning environment.

Internships and industry-sponsored projects allow students to build skills while also develop important employment connections.
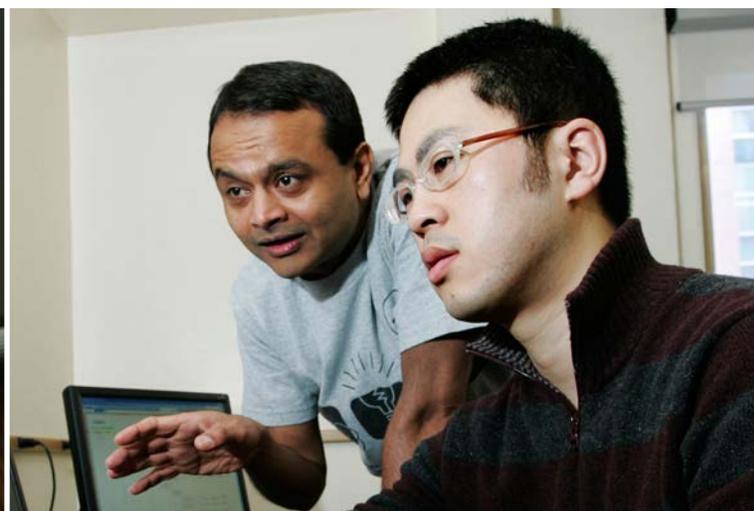
Program Structure

M.Sc. CDA courses are relevant to industry, providing practical experience with a broad range of technologies to ensure students can adapt to industry needs and trends: Java/J2EE, JavaScript (jQuery/jQuery Mobile/node.js), PHP, C#/.NET, HTML5, iOS, Android, IBM Bluemix, Azure, SAS, Cognos, Tableau, Oracle BI, SQL/MySQL, NoSQL/Mongo DB, R, Python, IBM Watson, Scala and Spark.

Core courses are taught by faculty members from the Department of Mathematics and Computer Science and the Sobey School of Business. Each course also features industry professionals, who provide students with real-world learning experiences. The program's extensive tutoring and technical mentorship includes group sessions, one-on-one instruction, and practice.

M.Sc CDA students won first place, second place and honourable mention at the 2017 Open Data Hackathon.

September to May (8 months)		May to December (8 months)
Computing Courses	**Data Analytics Courses**	**Applied Learning Options**

Computing Courses

1. Software Development in Business Environment
2. Web, Mobile, and Cloud Development
3. Human-Computer Interaction
4. Managing Information Technology and Systems

Data Analytics Courses

1. Statistics and Its Applications in Business
2. Managing & Programming Databases
3. Business Intelligence
4. Data Mining

Applied Learning Options

Complete one of the following:

1. Internships
2. Applied industry projects:
   • System analysis;
   • Implementation and results analysis
3. Thesis

Course Descriptions: www.smu.ca/academics/msccda-courses

Professional Development

Fall Hackathon	Conferences	Career Development	Industry Workshops	Spring Hackathon	Project Management	Professional Mentorship

Your Future is in Data.
Our M.Sc. CDA program will help you get there.

- 216,000 critical digital talent positions in Canada will need to be filled by 2021. (Information and Communications Technology Council)

- 56% of Fortune 500 companies will increase investments in Big Data over next three years. (Forbes)

- Big Data will need 1.5 million managers by 2018. (McKinsey Global Report)

- There was a 123.60% jump in demand for Information Technology Project Managers with analytics expertise over the last twelve months. (Forbes)

Partnerships

Application Deadline

September 2018 admission: Apply by May 1, 2018

M.Sc. CDA cohorts are limited; students are encouraged to apply early.

Admission Requirements

- Four-yr B.Sc. in Computing Science (or equivalent), with a GPA of 70%
- Saint Mary's programming test to evaluate candidates' computing skills. Applicants will write two computer programs and complete a technical interview conducted in-person or via Skype or Google Hangouts.
- Letter of Intent
- Up-to-date CV
- 3 letters of recommendation

Language Requirements

Students whose first language is not English and who have not attended an English language secondary school or completed a degree entirely in English, must meet one of the following:

- **TOEFL** - Minimum 550 on paper-based, iBt 80, no band below 20
- **IELTS:** Minimum 6.5, no individual score below 6.0
- **English for Academic Purposes Level 6 course** administered by the Language Centre at Saint Mary's.

Tuition Fees

International Students........................$ 34,000 (CAD)*
*Estimated, in 4 installments. Excludes associated fees & living expenses. For miscellaneous university fees, please use our Graduate Tuition calculator: www.smu.ca/academics/graduate-tuition-calculator.html

Saint Mary's Campus

A customized multi-million dollar learning space designed specifically for M.Sc. CDA students that will featuring state-of-the-art computer hardware and software will open in January 2018.

Saint Mary's has a government certified immigration counsellor who advises students on all visa and post graduate work permit matters.

Halifax: Atlantic Canada's Innovation Hub

Saint Mary's University, a world-class institution with a rich 200+ year history, offers state-of-the-art facilities and a dynamic, multicultural community. Saint Mary's is located in Halifax, Nova Scotia, the bustling economic and cultural centre of Canada's east coast.

Nova Scotia recently solidified its commitment to the growth of industry and data analytics with the establishment of the IBM Global Delivery Center. This centre, is a collaboration between Saint Mary's University, IBM, and other post-secondary educational institutions in the region.

Our students benefit from IBM's active academic alliance program which provides data analytics resources including licensing of software, instructional videos, and data analytics case studies. The collaboration also includes involvement of IBM professionals in student mentoring.