Master of Data Science and Artificial Intelligence

Become an excellent data professional

In the era of big data today, most enterprises are using big data. Every link of the data industry needs to be completed by professionals. However, the ability to uncover business insights based on data is a highly specialized skills processed by too few people. The supply of data professionals who can derive business insights and make informed decisions from data is far from meeting the market demand.

Master of Data Science and Artificial Intelligence program was designed to address this workforce gap by equipping students with the technical skills, business skills, practical experience, and most importantly, the confidence to seize opportunities in an ever-expanding field.

Program Features

Comprehensive learning

The combination of the theoretical learning and the practical learning

Real-world experience

Students gain practical experience using real data sets across a range of domains

Diverse datasets

Students have chances to apply their theoretical knowledge in the real company business problems.

TERM 1

- Two introductory courses required
- Elective courses

TERM 2

- Core courses
- Elective courses

TERM 3

- Co-op work placement

TERM 4

- Elective courses
- Capstone Project

Technical – Oriented

Core Courses

- Machine Learning With Applications In Python
- Data Modeling and Database Management
- Data Analytics: Methods and Practical Approaches
- Introduction to Artificial Intelligence
- Applications with Deep Learning

Elective Courses

- Modeling Tools for Predictive Analytics
- Experimental Design for Data Science
- Storytelling with Data using Tableau
- Research Data and Research Operations
- Forecasting and Time Series Analytics
- Cloud Technology in Data Science
- R for Data Science
- Optimization Techniques
- Stochastic Modeling
- Reinforcement Learning

Business – Oriented

Core Courses

- Business Leadership and Communication
- Data Mining for Business Applications
- Business Problem Analysis and Management

Elective Courses

- Business Immersion
- Analytics in Management
- Supply Chain Management
- Data Driven Investments
- Simulation and Risk Analytics
- Analytics for Marketing Strategy

Specializations

Data Analysis Specialization

Data Science Specialization

Data Engineering Specialization

Data Management Specialization

Note: Each specialization has different required core courses and recommended elective courses. Students need to complete those requirement to gain the degree.

Co-op Program

Events & Workshops

Writing Center

Capstone Project

Master of
Data Science And Artificial Intelligence

Become an excellent data professional

In the era of big data today, most enterprises are using big data. Every link of the data industry needs to be completed by professionals. However, the ability to uncover business insights based on data is a highly specialized skills processed by too few people. The supply of data professionals who can derive business insights and make informed decisions from data is far from meeting the market demand.

Master of Data Science and Artificial Intelligence program was designed to address this workforce gap by equipping students with the technical skills, business skills, practical experience, and most importantly, the confidence to seize opportunities in an ever-expanding field.

Program Features

Comprehensive learning

The combination of the theoretical learning and the practical learning

Diverse datasets

Students gain practical experience using real data sets across a range of domains

Real – world experience

Students have chances to apply their theoretical knowledge in the real company business problems.

Skills Developed throughout the program

Technical – oriented skills:

Coding & Software Skills: Python, SQL, R, Tableau, Cloud.

Professional skills: data analysis, machine learning, database management, data modeling, data visualization, statistics, mathematics, data mining.

Business – oriented skills:

Business decision making skills, Business intelligence, Business analytics, Business management, leadership skills, communication skills, teamwork, writing skills, research skills, presentation skills

2- year Program Timeline:

Term1:
Two introductory courses required
+ Elective courses

Term2:
Core Courses + Elective Courses

Term3:
Co-op work placement

Term4:
Elective Courses
Or
Capstone Project

Courses:

Introductory Courses:

Programming for Data Science	Statistics for Data Science

Core Courses:

Technical – Oriented Courses:

- Machine Learning With Applications In Python
- Data Modeling and Database Management
- Data Analytics: Methods and Practical Approaches
- Introduction to Artificial Intelligence
- Applications with Deep Learning

Business – oriented courses:

- Business Leadership and Communication
- Data Mining for Business Applications
- Business Problem Analysis and Management

Elective Courses:

Technical – oriented Courses:

- Modeling Tools for Predictive Analytics
- Experimental Design for Data Science
- Storytelling with Data using Tableau
- Research Data and Research Operations
- Forecasting and Time Series Analytics
- Cloud Technology in Data Science
- R for Data Science
- Optimization Techniques
- Stochastic Modeling
- Reinforcement Learning

Business – oriented Courses:

- Business Immersion
- Analytics in Management
- Supply Chain Management
- Data Driven Investments
- Simulation and Risk Analytics
- Analytics for Marketing Strategy

Specializations:

Note: Each specialization has different required core courses and recommended elective courses. Students need to complete those requirement to gain the degree.

Data Analysis Specialization

Data Science specialization

Data Engineering Specialization

Data Management Specialization

Other Activities:

Co – op Program

Co-operative education (Co-op) is an experiential learning program attained in partinership between students, employers and the program ‘master of Data Science and Artificial Intelligence’ . Through Co-op, students complete up to paid, full- time co-op work terms and gain professional experience in their fields of study from working in the local companies. It is an opportunity to apply knowledge in a professional situation and gain academic credits.

Events & Workshops

The faculty provides various workshops to the students to improve their comprehensive quality and help them better become a data professional after graduation. These workshops include but not limited resume customize workshop, interview mock workshop, cover letter customize workshop, data visualization workshop, data presentatin workshop.

Writing Center

The writing center is aimed to help students improve their writing skills, including the grammar correction, language expression polish, etc.

Capstone Project

The optional capstone project is equivalent to two electives. It needs to be completed over two terms and involves research, report writing and presentation. It will provide the students with real-world problems and allow them to apply the tools and methodologies they learnt creatively.