DSA: Honours Bachelor of Data Science and Analytics

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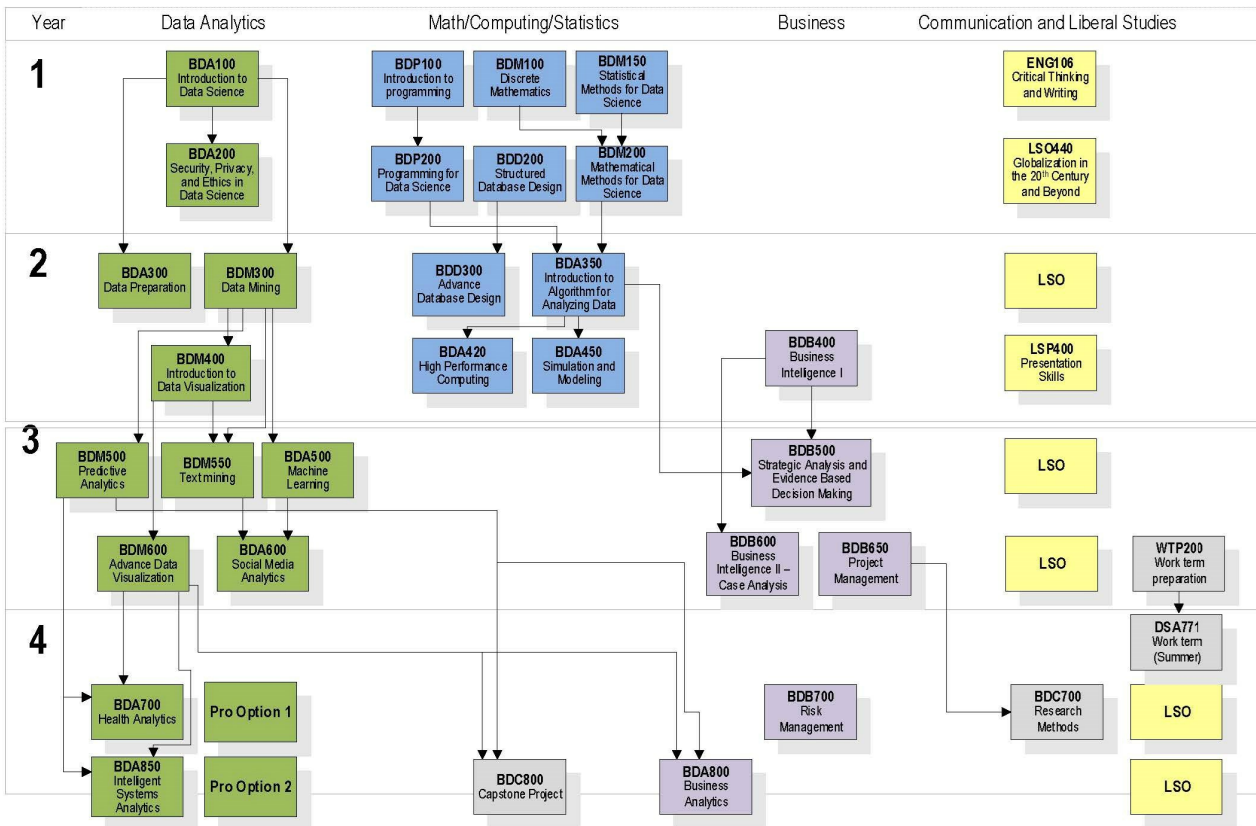
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Program Code:	DSA
Credential Awarded:	Honours Bachelor of Data Science and Analytics
Campus:	Newnham
Duration:	4 years (8 academic semesters)
Starts In:	January and September

Program Map

Data Science and Analytics (DSA) Curriculum
Program Entry Date: 2023/2024

Seneca College - School of Software Design and Data Science

Program Curriculum

Honours Bachelor of Data Science and Analytics - DSA - 23-24

Semester 1		
Course Code	Course Name	Prerequisites
BDA100	Introduction to Data Science	None
BDM100	Discrete Mathematics	None
BDM150	Statistical Methods for Data Science	None
BDP100	Introduction to Programming	None
ENG106	Writing Strategies	None

Semester 2		
Course Code	Course Name	Prerequisite
BDA200	Security, Privacy and Ethics in Data Science	BDA100

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BDD200	Structured Database Design	None
BDM200	Mathematical Methods for Data Science	BDM150 & BDM100
BDP200	Programming for Data Science	BDP100
LSO440	20th Century Globalization	None

Semester 3		
Course Code	Course Name	Prerequisite
BDA300	Data Preparation	BDA100
BDA350	Introduction to Algorithms and Analyzing Data	BDM200 & BDP200
BDD300	Advanced Database Design	BDD200
BDM300	Data Mining	BDM200 & BDA100
	Liberal Studies Option	

Semester 4		
Course Code	Course Name	Prerequisite
BDA420	High Performance Computing	BDA350
BDA450	Simulation and Modelling	BDA350
BDB400	Business Intelligence I	None
BDM400	Introduction to Data Visualization	BDM300
LSP400	Presentations Skills	ENG205 or its equivalent

Semester 5		
Course Code	Course Name	Prerequisite
BDA500	Machine Learning	BDM300
BDB500	Strategic Analysis and Evidence Based Decision-Making	BDB400
BDM500	Predictive Analytics	BDM300
BDM550	Text Mining	BDM400 & BDM300
	Liberal Studies Option	None

Semester 6		
Course Code	Course Name	Prerequisite
BDA600	Social Media Analytics	BDM550 & BDA500
BDB600	Business Intelligence II - Case Analysis	BDB400
BDB650	Project Management	None
BDM600	Advanced Data Visualization	BDM400
WTP200	Work Integrated Learning - pre work term preparation	
	Liberal Studies Option	None

Work Term		
Course Code	Course Name	Prerequisite
DSA771	Data Science Analytics, Co-op	WTP200

Semester 7		
Course Code	Course Name	Prerequisite
BDA700	Health Analytics	BDM600, BDM500
BDB700	Risk Management	None
BTM710	Research Methods	BDB650
	Liberal Studies Option	
	Professional Option	

Semester 8		
Course Code	Course Name	Prerequisite
BDA800	Business Analytics	BDM600, BDM500, DSA771
BDA850	Intelligent Systems Analytics	BDM500, BDM600, DSA771
BDC800	Capstone Project	BDM600, BDM500, DSA771
	Liberal Studies Option	
	Professional Option	

Pro Options		
Course Code	Course Name	Prerequisite
DPS950	Introduction to Microsoft Cloud Technologies	BDP200
BTH745	Human-Computer Interaction	
BTM600	Digital Entrepreneurship	
DPS960	Advanced Data Analytics Tools	

As a graduate, you will be prepared to reliably demonstrate the ability to:

- Prepare data for analysis by gathering, cleaning, and storing it into application specific data models.
- Generate knowledge through the analysis of big data sets by using statistical, mathematical, and computational methodologies and techniques.
- Sustain tactical and strategic business intelligence by interpreting, analyzing, and visualizing big data sets using software tools, data models, and algorithms.
- Create predictive models using statistical, data mining and machine learning techniques to support data driven decision-making.
- Develop material for a range of audiences, using visualization techniques, and communications technologies.
- Apply project management methodologies, tools, and techniques for big data projects in cross-functional, intercultural, and multi-disciplinary teams.
- Conduct research to provide evidence to support data-driven decision-making and alignment with organizational strategy.
- Adhere to ethical and legal guidelines to ensure data security, integrity, and confidentiality in the delivery of data-driven business intelligence.
- Apply interpersonal, team building, and leadership skills when participating in diverse organizational environments.

Further Information About This Program from Seneca's Website

Pathways

tags : degree, dsa, sdds