The Degree of Bachelor of Data Science (BDataSc – 360 Points)

These regulations must be read in conjunction with the General Regulations for the University.

1. Version

(a) These Regulations came into force on 1 January 2021.
(b) This degree was first offered in 2021.

2. Variations

In exceptional circumstances the Amo Matua, Pūtaiao | Executive Dean of Science or delegate may approve a personal programme of study which does not conform to these regulations.

3. The structure of the qualification

To qualify for the Bachelor of Data Science a student must:

(a) be credited with a minimum of 360 points towards the qualification; and
(b) be credited with a minimum of 165 points from Schedule C: Group 1, 15 points from Schedule C: Group 2 and 15 points from Schedule C: Group 3 to these regulations; and
(c) have satisfied the requirements for a major in a subject as specified in Schedule S; and
(d) be credited with:
    i. a minimum of 225 points above 100-level and;
    ii. a minimum of 105 points at 300-level.

4. Admission to the qualification

All students must satisfy the Admission Regulations for the University to be admitted to this qualification.

5. Subjects

The majors for the degree are listed in Schedule S to these Regulations.

6. Time limits

The qualification adheres to the General Regulations for the University with a time limit of 10 years.

7. Transfers of credit, substitutions and cross-credits

This qualification adheres to the General Conditions for Credit and Transfer Regulations, with no additional stipulations.

8. Progression

This qualification adheres to the General Regulations for the University, with no additional stipulations.

9. Honours, Distinction and Merit

Honours, Distinction and Merit are not awarded for this qualification.

10. Exit and Upgrade Pathways to other Qualifications

A student who has not met the requirements for the Bachelor of Data Science or who wishes to transfer to the Certificate of Science may apply to the Amo Matua, Pūtaiao | Executive Dean of Science or delegate for admission.

Schedule C: Compulsory Courses for the Degree of Bachelor of Data Science

For full course information, go to courseinfo.canterbury.ac.nz

The following outlines the Core requirements.

Schedule C: Group 1

100-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
COSC121	Introduction to Computer Programming	15	S1	Campus	R: COSC131
			S2	Campus	
COSC122	Introduction to Computer Science	15	SU2	Campus	P: COSC121 or COSC131
			S2	Campus	
DATA101	Introduction to Data Science	15	S2	Campus	P: 1. MATH101 or EMTH117, or 2. NCEA 14 Credits at level 3 Mathematics, or 3. Cambridge: D at A level or an A at AS level in Mathematics, or 4. IB: 4 at HL or 5 at SL in Mathematics, or 5. Approval of the Head of School based on alternative prior learning. R: STAT101 and DIGI103
MATH102	Mathematics 1A	15	S1	Campus	P: 1. MATH101, or 2. NCEA 14 Credits at level 3 Mathematics, or 3. Cambridge: D at A level or an A at AS level in Mathematics, or 4. IB: 4 at HL or 5 at SL in Mathematics, or 5. Approval of the Head of School based on alternative prior learning. R: MATH108, MATH199, EMTH118
			S2	Campus	
SCIE101	Science, Society and Me	15	S2	Campus	
			S2	Distance Learning	

200-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
COSC262	Algorithms	15	S1	Campus	P: (1) COSC121 or COSC131; (2) COSC122; RP: MATH120
DATA201	Data Wrangling	15	S2	Campus	P: 15 points of 100 level COSC, DATA, MATH, or STAT or INFO125
DATA203	Data Science Multivariable Methods	15	S1	Campus	P: One of DATA101, STAT101 or EMTH119; and one of MATH102, MATH199 or EMTH118 R: MATH203 / EMTH211
PHIL240	Bioethics: Life, Death, and Medicine	15	S2	Campus	P: Any 15 points at 100 level in PHIL, HSRV, HLTH, LAWS, or POLS, or any 60 points at 100 level from the Schedule V of the BA or the BSc. R: PHIL324, POLS225
			S2	Distance Learning	

Schedule C: Group 2

And 15 points selected from:

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
STAT201	Applied Statistics	15	S1	Campus	P: STAT101 or DATA101 or 15 points from 100-level MATH or EMTH (excluding MATH110) R: FORE210, STAT220, FORE222, STAT222
STAT202	Regression Modelling	15	S2	Campus	P: STAT101 or DATA101 or 15 points from 100-level MATH or EMTH (excluding MATH110) R: FORE210, STAT220, FORE224, STAT224

300-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
DATA301	Big Data Computing and Systems	15	S1	Campus	P: COSC 262
DATA303	Computational Data Methods	15	S2	Campus	P: MATH203 or DATA203 or EMTH211 R: MATH303

Schedule C: Group 3

And 15 points selected from:

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
STAT315	Multivariable Statistical Methods and Applications	15	S1	Campus	P: 15 points from STAT200-299 and a further 15 points from DATA200-299 or STAT200-299.
STAT318	Statistical Learning	15	S1	Campus	P: (1) One of MATH102, EMTH118, MATH199 (for foundational mathematics); (2) one of STAT101, DATA101, MATH120, EMTH119, DATA203, STAT211, STAT213, STAT221 (for basics in probability theory); and (3) one of STAT201, STAT202, EMTH211, ECON213, ECON214, STAT315, ECON324 (for familiarity with linear regression and related methods). All of the above can be replaced by suitable alternatives or demonstration of prior knowledge with approval of the Head of School of Mathematics and Statistics. RP: MATH103 or equivalent, STAT211, STAT202.

Schedule S: Subject courses for the Degree of Bachelor of Data Science

Note: The following information outlines the requirement for the individual majors. These requirements are in addition to Schedule C: Compulsory Courses.

Bioinformatics

100-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
BIOL111	Cellular Biology and Biochemistry	15	S1	Campus	R: ENCH281 and BCHM111 EQ: BCHM111
BIOL112	Ecology, Evolution and Conservation	15	S2	Campus	

200-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
BIOL215	Exploring Biodiversity: Principles and Methods of Systematics	15	S2	Campus	P: BIOL112 or BIOL113 (RP: BIOL111
BIOL231	Foundations in Molecular Biology	15	S1	Campus	P: BIOL111 (=BCHM111) or ENCH281 R: BCHM202, ENCH480, BIOL230 EQ: BCHM202, ENCH480
BIOL271	Evolution	15	S1	Campus	P: BIOL112

300-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
BIOL333	Molecular Genetics	15	S1	Campus	P: BIOL231 (=BCHM202)
BIOL334	Evolutionary Genetics and Genomics	15	S2	Campus	P: BIOL215 and BIOL271 R: BIOL330
BIOL337	Bioinformatics	15	S1	Campus	P: [BIOL231 or BIOL215 or BIOL271] AND [STAT201 or STAT202 or BIOL209]
BIOL338	Bioinformatics Project	30	S2	Campus	P: BIOL337

All remaining courses to be chosen from:

i. Any undergraduate course at UC

Business Analytics

100-level

Students must complete 30 points from:

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
ACCT102	Accounting and Financial Information	15	S1	Campus	R: ACIS102, AFIS101, AFIS102, AFIS111, AFIS122, AFIS132, AFIS188.
			S2	Campus	
ACCT103	Accounting and Taxation: An Introduction	15	S1	Campus	P: ACCT102 R: ACIS103, AFIS101, AFIS103, AFIS111, AFIS121, AFIS131
			S2	Campus	
ECON104	Introduction to Microeconomics	15	S1	Campus	R: ECON199
			S2	Campus	
ECON105	Introduction to Macroeconomics	15	S1	Campus	
			S2	Campus	
INFO123	Business Information Systems and Technology	15	S1	Campus	R: ACIS123, AFIS123, AFIS124
			S2	Campus	
MGMT100	Fundamentals of Management	15	S1	Campus	R: MGMT101
			S2	Campus	
MGMT170	Managerial Decision Making	15	S2	Campus	R: MSCI101
MKTG100	Principles of Marketing	15	S1	Campus	R: MGMT102 EQ: MGMT102
			S2	Campus	

200-level

Students must complete 30 points from:

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
INFO260	Data Management	15	S2	Campus	P: 1) INFO123 or INFO125 or COSC101 or COSC121 or COSC131 or COSC122 or DIGI101; and (2) An additional 15 points
INFO261	Introduction to Business Analytics	15	S1	Campus	P: (1) 15 points from STAT101, DATA101, DIGI103; and (2) 15 points from INFO123, INFO125, COSC101, COSC121, COSC122, COSC131, DIGI101 R: MBIS624

and any 200-level course from ACCT, ECON, FINC, INFO, MGMT, MKTG

300-level

Students must complete:

i. 30 points at 300-level ACCT; or
ii. 30 points at 300-level ECON; or
iii. 30 points at 300-level FINC; or
iv. 30 points at 300-level INFO; or
v. 30 points at 300-level MGMT; or
vi. 30 points at 300-level MKTG.

Computational Linguistics (not open to new enrolments)

100-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
LING101	How Language Works	15	S1	Campus	R: ENGL123, ENLA101
			S1	Distance Learning	
LING102	Language and Society in New Zealand and Beyond	15	S2	Distance Learning	R: ENLA102 EQ: ENLA102
			S2	Campus	

200-level

Students must complete 45 points of 200-level LING or DIGI including:

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
LING217	Grammatical structure	15	S2	Campus	P: Any 15 points at any level from LING. R: LING201, LING206, LING211
			S2	Distance Learning	
LING223	Text Analytics	15	NO		P: 15 points at any level from any subject. R: DIGI223 EQ: DIGI223

300-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
COSC367	Artificial Intelligence	15	S2	Campus	P: COSC262
LING310	Linguistics Research Project	30	S2	Campus	P: Any 15 points at 200 level from LING. R: ENLA310 EQ: ENLA310
			S2	Distance Learning	

All remaining courses to be chosen from:

i. Other LING or DIGI courses
ii. COSC261
iii. Any 200-level DATA course
iv. Any 200-level STAT course
v. Any 300-level DATA course
vi. Any 300-level STAT course
vii. Any 300-level COSC course.

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100-level

Any 100-level course at UC

200-level

Students must complete 15 points from STAT211–299; and

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
COSC265	Relational Database Systems	15	S2	Campus	P: COSC121 or COSC131 or INFO125

300-level

Students must complete 15 points from STAT315 and STAT318

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
COSC367	Artificial Intelligence	15	S2	Campus	P: COSC262
DATA309	Data Science Capstone Project	30	A	Campus	P: Subject to approval of the Head of Department.
			S2	Campus	
STAT315	Multivariable Statistical Methods and Applications	15	S1	Campus	P: 15 points from STAT200-299 and a further 15 points from DATA200-299 or STAT200-299.

All remaining courses to be chosen from:

i. Any 200-level course at UC
ii. Any 300-level COSC course
iii. Any 300-level DATA course
iv. Any 300-level MATH course
v. Any 300-level SENG course
vi. Any 300-level STAT course

Population Health Data Science

100-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
GISC101	Introduction to Spatial Data Science	15	S1	Campus	

And 15 points from:

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
HLTH101	Introduction to Health Studies	15	S1	Campus	
			S1	Distance Learning	
HLTH102	Health Promotion	15	S2	Campus	
			S2	Distance Learning	
HLTH106	Te Wero - Maori Health Issues and Opportunities	15	S1	Campus	
			S1	Distance Learning	

200-level

Students must complete the following:

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
HLTH203	Epidemiology	15	S1	Campus	P: Any 60 points at 100 level from any subject. R: HLTH110
HLTH213	Health Systems and Policy	15	S1	Campus	P: Any 60 points at 100 level in any subject.
HLTH214	Environmental and Occupational Health	15	S2	Campus	P: Any 60 points at 100 level from any subject, or any 30 points at 100 level from HLTH or SPCO

300-level

Students must complete a minimum of 60 points of GEOG/HLTH at 300-level including:

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
DATA309	Data Science Capstone Project	30	A	Campus	P: Subject to approval of the Head of Department.
			S2	Campus	
GEOG325	Health, Wellbeing and Environment	15	S1	Campus	P: 30 points of Geography at 200 level; or 30 points from Science, Arts or Health Sciences, including GEOG205. R: GEOG322
HLTH312	Health Planning, Implementation and Evaluation	15	S1	Campus	P: Any 30 points at 200 level from Health Science (HLTH or HLED).

All remaining courses to be chosen from:

100-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
GEOG106	Global Environmental Change	15	S2	Campus	R: GEOG103
GEOG110	People, Places and Environments	15	S1	Campus	R: GEOG107
HLTH101	Introduction to Health Studies	15	S1	Campus	
			S1	Distance Learning	
HLTH106	Te Wero - Maori Health Issues and Opportunities	15	S1	Campus	
			S1	Distance Learning	
HLTH111	Global Health	15	S1	Campus	

200-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
GEOG205	Introduction to Geographic Information Systems	15	S1	Campus	P: 45 points at 100-level or above, from any degree schedule. R: DIGI205 and GISC422
GEOG217	Places for Wellbeing and Flourishing	15	S2	Campus	P: Any 30 points at 100 level from any subject, normally including GEOG110 or GEOG106.
HLTH202	Health and Society: Applied Research for Aotearoa	15	NO		P: Any 60 points at 100 level from any subject.

300-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
GEOG323	Geospatial Analysis in the Social and Environmental Sciences	15	S1	Campus	P: 30 points of 200-level Geography, including GEOG205, or in special cases with approval of the Head of Department.
GEOG324	Web GIS and Geoinformatics	15	S2	Campus	P: GISC101 (preferred) or GEOG205/DIGI205 or COSC121, or equivalent. Recommended preparation: This course requires regular programming for spatial data so background skills in these areas are highly desirable. R: GISC412 RP: This course requires regular programming for spatial data so background skills in these areas are highly desirable.

Spatial Data Science

100-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
GISC101	Introduction to Spatial Data Science	15	S1	Campus	

And either

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
GEOG106	Global Environmental Change	15	S2	Campus	R: GEOG103

or

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
GEOG110	People, Places and Environments	15	S1	Campus	R: GEOG107

200-level

45 points of 200-level GEOG including:

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
GEOG205	Introduction to Geographic Information Systems	15	S1	Campus	P: 45 points at 100-level or above, from any degree schedule. R: DIGI205 and GISC422
GEOG208	Remote sensing for geospatial analysis	15	S2	Campus	P: Any 30 points of 100-level Science, Engineering or Commerce R: GEOG313

300-level

Students must complete a minimum of 60 points of GEOG/GISC at 300-level including:

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
GEOG323	Geospatial Analysis in the Social and Environmental Sciences	15	S1	Campus	P: 30 points of 200-level Geography, including GEOG205, or in special cases with approval of the Head of Department.
GEOG324	Web GIS and Geoinformatics	15	S2	Campus	P: GISC101 (preferred) or GEOG205/DIGI205 or COSC121, or equivalent. Recommended preparation: This course requires regular programming for spatial data so background skills in these areas are highly desirable. R: GISC412 RP: This course requires regular programming for spatial data so background skills in these areas are highly desirable.

All remaining courses to be chosen from:

100-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
ENVR101	Introduction to Environmental Science	15	S1	Campus	

200-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
GEOG201	Environmental Processes: Principles and Applications	15	S1	Campus	P: Any 30 points from GEOG106, GEOG110, ENVR101 or GEOL101, or entry with approval of the Head of School. R: GEOG201 prior to 2009.
GEOG211	Mountain Weather and Climates	15	S1	Campus	P: GEOG106 or ENVR101 or 15 points from CHEM, PHYS, GEOL, BIOL, ASTR, MATH at 100-level
GEOG222	Transport, Urban Development and Wellbeing	15	S1	Campus	P: 45 pts of 100 level including GEOG110 or GEOG106

300-level

Course Code	Course Title	Pts	2025	Location	P/C/R/RP/EQ
GEOG310	Weather Systems	15	S2	Campus	P: GEOG211 and 15 points from Schedule S to the BSc
GEOG325	Health, Wellbeing and Environment	15	S1	Campus	P: 30 points of Geography at 200 level; or 30 points from Science, Arts or Health Sciences, including GEOG205. R: GEOG322