

HONG KONG METROPOLITAN UNIVERSITY
(Formerly The Open University of Hong Kong)

Programme Requirements for Bachelor of Science with Honours in Data Science (BSCHDSJ)

To be eligible for the award of the **Bachelor of Science with Honours in Data Science**, a student shall obtain the required number of credits specified for the Year of Entry, in courses prescribed and detailed in the course tables below.

For students admitted via Year 1 entry in or after 2021/22, via Year 2 entry in or after 2022/23 and via Year 3 entry in or after 2023/24, they must complete the four University Core Values Modules, namely Core Value I (Integrity), Core Value II (Fairness), Core Value III (Perseverance), and Core Value IV (Innovation) for graduation.

For students admitted **in the 2020/21 academic year or thereafter**, please refer to Page 1 to 3.
For Year 3 students admitted **before the 2020/21 academic year**, please refer to Page 4 to 5.

For students admitted in the 2020/21 academic year or thereafter

Year 1 Entry

A student admitted to the programme through Year 1 Entry is required to complete a total of 160 credits as prescribed below, of which no more than 40 credits should be taken at Foundation Level:

1. 120 credits of core courses in Tables 1 and 2;
2. 10 credits of elective courses from Table 3;
3. 10 credits of English Language Enhancement courses *; and

** Note: Please refer to the updated list of English Language Enhancement courses posted on the University website (www.hkmu.edu.hk/FT_ENGLISH).*

4. 20 credits of purpose-designed General Education courses[#].

Note: Please refer to the updated list of purpose-designed General Education courses posted on the University website (www.hkmu.edu.hk/FT_GE).

Year 3 Entry

A student admitted to the programme through Year 3 Entry is required to complete a total of 80 credits as prescribed below:

1. 70 credits of core courses in Table 2; and
2. 10 credits of elective course from Table 3.

Table 1: Core Courses (Foundation and Middle Level)

Course Code	Course Title	Credits	Course Level	Course Group for Honours Classification
COMP S202F	Java Programming Fundamentals	5	Middle	b
COMP S203F	Intermediate Java Programming and User Interface Design	5	Middle	b
COMP S208F	Introduction to Computer Programming	5	Middle	b
COMP S209F	Data Structures, Algorithms, and Problem Solving	5	Middle	b
MATH S141F	Algebra and Calculus	5	Foundation	-
MATH S262F	Linear Algebra	5	Middle	b
STAT S151F	Probability and Distribution	5	Foundation	-
STAT S251F	Statistical Data Analysis	5	Middle	b
STAT S261F	Data Analytics with Applications	5	Middle	b
STAT S263F	Big Data in Organizations	5	Middle	b

Table 2: Core Courses (Higher Level)

Course Code	Course Title	Credits	Course Level	Course Group for Honours Classification
COMP S320F	Database Management	5	Higher	a or b
COMP S321F	Advanced Database and Data Warehousing	5	Higher	a or b
COMP S350F ³	Software Engineering	5	Higher	a or b
COMP S351F ³	Software Project Management	5	Higher	a or b
COMP S381F	Server-side Technologies and Cloud Computing	5	Higher	a or b
COMP S382F	Data Mining and Analytics	5	Higher	a or b
COMP S460F ¹	Advanced Topics in Data Mining	5	Higher	a or b
COMP S461F ¹	Data Science Project	10	Higher	a or b
COMP S492F	Artificial Intelligence	5	Higher	a or b
STAT S311F	Time Series Analysis and Forecasting	5	Higher	a or b
STAT S313F	High Dimensional Data Analysis	5	Higher	a or b
STAT S314F	Regression in Practice	5	Higher	a or b
STAT S366F	SAS Programming	5	Higher	a or b

Table 3: Elective Courses (Higher Level)

Course Code	Course Title	Credits	Course Level	Course Group for Honours Classification
COMP S380F	Web Applications: Design and Development	5	Higher	a or b
COMP S413F	Application Design and Development For Mobile Devices	5	Higher	a or b
ECON A231F	Introduction to Microeconomics	5	Middle	b
ECON A332F	Applied Business Economics	5	Higher	a or b
ELEC S425F	Computer and Network Security	5	Higher	a or b
SCI S330F	Scientific Research Methods	5	Higher	a or b
STAT S315F	Stochastic Process	5	Higher	a or b

Note:

1. *List of changes in course codes:*

Original Course Code	Revised Course Code	Effective Term
<i>STAT S460F</i>	<i>COMP S460F</i>	<i>2021 Autumn</i>
<i>STAT S461F</i>	<i>COMP S461F</i>	<i>2022 Autumn</i>

2. *If students wish to retake counterpart course(s) in e-learning mode, they should seek Programme Leader's approval, with due consideration of factors such as clash of timetabling and availability of distance learning counterparts, etc..*

3. *COMP S356F has been split into COMP S350F and COMP S351F. If students have successfully completed COMP S356F, they are deemed to have satisfied the requirements of COMP S350F and COMP S351F.*

Honours Classification

For the purpose of honours classification of the **Bachelor of Science with Honours in Data Science** programme, relevant courses are categorized as Group (a) and Group (b) as shown in Tables 1, 2 and 3 above.

- (1) Group (a) courses shall consist of the best 40 credits from the Higher Level courses listed in Tables 2 and 3.
- (2) Group (b) courses shall consist of the best 40 credits in courses at Middle or Higher Level courses listed in Tables 1, 2, and 3, where such credits are not taken into account in Group (a).
- (3) Group (a) shall be weighted at twice the value of Group (b).

For Year 3 students admitted before the 2020/21 academic year (BSCHDSF)

The **Bachelor of Science with Honours in Data Sciences (Year 3 Entry)** programme requires a student to complete a total of 85 credits as prescribed below:

1. 75 credits of core courses in Table 4;
2. 5 credits of elective course from Table 5; and
3. 5 credits of English Language Enhancement courses*.

** Note: Please consult the Programme Leader for the selection of English Language Enhancement courses posted on the University website (www.hkmu.edu.hk/FT_ENGLISH).*

Table 4: Core courses

Course Code	Course Title	Credits	Course Level	Course Group for Honours Classification
COMP S208F	Introduction to Computer Programming	5	Middle	b
COMP S209F	Data Structures, Algorithms, and Problem Solving	5	Middle	b
COMP S320F ²	Database Management	5	Higher	a or b
COMP S321F	Advanced Database and Data Warehousing	5	Higher	a or b
COMP S381F	Server-side Technologies and Cloud Computing	5	Higher	a or b
COMP S382F	Data Mining and Analytics	5	Higher	a or b
COMP S460F ²	Advanced Topics in Data Mining	5	Higher	a or b
COMP S461F ²	Data Science Project	10	Higher	a or b
COMP S492F	Machine Learning	5	Higher	a or b
STAT S251F	Statistical Data Analysis	5	Middle	b
STAT S311F	Time Series Analysis and Forecasting	5	Higher	a or b
STAT S313F	High Dimensional Data Analysis	5	Higher	a or b
STAT S314F	Regression in Practice	5	Higher	a or b
STAT S366F	SAS Programming	5	Higher	a or b

Table 5: Elective courses

Course Code	Course Title	Credits	Course Level	Course Group for Honours Classification
COMP S380F	Web Applications: Design and Development	5	Higher	a or b
COMP S413F	Application Design and Development for Mobile Devices	5	Higher	a or b
ECON A231F	Introduction to Microeconomics	5	Middle	b
ECON A332F	Applied Business Economics	5	Higher	a or b
ELEC S425F	Computer and Network Security	5	Higher	a or b
SCI S330F	Scientific Research Methods	5	Higher	a or b
STAT S315F	Stochastic Process	5	Higher	a or b

Note:

4. *List of changes in course codes:*

<i>Original Course Code</i>	<i>Revised Course Code</i>	<i>Effective Term</i>
<i>IT S320F</i>	<i>COMP S320F</i>	<i>2020 Autumn</i>
<i>STAT S460F</i>	<i>COMP S460F</i>	<i>2021 Autumn</i>
<i>STAT S461F</i>	<i>COMP S461F</i>	<i>2022 Autumn</i>

5. *If students wish to retake counterpart course(s) in e-learning mode, they should seek Programme Leader's approval, with due consideration of factors such as clash of timetabling and availability of distance learning counterparts, etc.*

Honours Classification

For the purpose of honours classification of the **Bachelor of Science with Honours in Data Science** programme, relevant courses are categorized as Group (a) and Group (b) as shown in Tables 4 and 5.

- (1) Group (a) courses shall consist of the best 40 credits from the Higher Level courses listed in Tables 4 and 5.
- (2) Group (b) courses shall consist of the best 40 credits in courses at Middle or Higher Level courses listed in Tables 4 and 5, where such credits are not taken into account in Group (a).
- (3) Group (a) shall be weighted at twice the value of Group (b).

Last update: August 2022