## **Program structure Data Science 2023**

For information about the courses, please find them in the NMBU Course search: <u>https://www.nmbu.no/en/studies/courses</u>

| ata scien | ce 2023 |  |      |        |          |                        |   |        |        | Mandatory courses   | 100                                    |                      |         |                  |         |           |      |                     |  |
|-----------|---------|--|------|--------|----------|------------------------|---|--------|--------|---|--|----------------------|---------|------------------|---------|-----------|------|---------------------|--|
| E         | CTS     | 5  | 5    | 5      | 5        | 5                      | 5 | 5      | Sum    | DAT121  | 5                                      | Introduction (       | Course  | for Data Scier   | ntists  |           |      |                     |  |
|           | Juni    |  |      |        |          |                        |   |        |        | INF201  | 5                                      | Advanced pro         | gramr   | ning             |         |           |      |                     |  |
|           | Vår     | Master thesis                                      |      |        |          |                        |   |        | 30     | INF202/203  | 202/203 5 Advanced programming project |                      |         |                  |         |           |      |                     |  |
|           | Jan     |  |      |        |          |                        |   |        |        | DAT200  | 10                                     | Machine Lear         | ning a  | nd Deep Learn    | ing     |           |      |                     |  |
|           | Høst    | DA   | Г300 | DAT390 |          | Elective <sup>2)</sup> |   |        | 30     | MATH280   | 10                                     |                      |         |                  |         |           |      |                     |  |
| 2. year   | Aug     |  |      |        |          |                        |   |        |        | INF221  | 10                                     | Computer Sci         | ence f  | or Data Scienti  | ists    |           |      |                     |  |
|           | Juni    | INF203 <sup>1)</sup>                               |      |        |          |                        |   |        |        | INF230  | 10                                     | Data Handling        | g and D | ata Bases        |         |           |      |                     |  |
|           | Vår     | DAT200 MATH280 INF221                              |      |        |          |                        |   | 30     | DAT300 | 10  | Applied deep learning                  |                      |         |                  |         |           |      |                     |  |
|           | Jan     | INF202 <sup>1)</sup>                               |      |        |          |                        |   |        | 5      | DAT390  | 5                                      | Data Science Seminar |         |                  |         |           |      |                     |  |
|           | Høst    | INF201   | INF  | 230    | Elective |                        |   |        | 20     | M30-DV  | 30                                     | Master's Thes        | is      |                  |         |           |      |                     |  |
| 1. year   | Aug     | DAT121   |      |        |          |                        |   |        | 5      |   |  |                      |         |                  |         |           |      |                     |  |
|           |         |  |      |        |          |                        |   | Total: | 120    | In addition, choose   | a min                                  | imum of 20 ECT       | S elect | ive specilisatio | n cours | ses.      |      |                     |  |
|           |         | 1) Choose between INF202 and INF203                |      |        |          |                        |   |        |        | Of these, at least 15 ECTS must be at 300-level. If the previous 10 ECTS version of DAT390 was chosen, at least 10 ECTS must be at 300- |  |                      |         |                  |         |           |      |                     |  |
|           |         | <sup>2)</sup> Choose elective courses on 300-level |      |        |          |                        |   |        |        |   |  |                      |         |                  |         |           |      |                     |  |
|           |         |  |      |        |          |                        |   |        |        |   |  |                      |         |                  |         |           |      |                     |  |
|           |         |  |      |        |          |                        |   |        |        | Elective courses:   |  |                      |         |                  |         |           |      |                     |  |
|           |         |  |      |        |          |                        |   |        |        | Data analysis and   |  | Energy               |         | Biological       |         |           |      |                     |  |
|           |         |  |      |        |          |                        |   |        |        | statistics  | ECTS                                   | physics              | ECTS    | physics          | ECTS    | Economics | ECTS |                     |  |
|           |         |  |      |        |          |                        |   |        |        | DAT320  | 10                                     | FYS301               | 10      | FYS388           |         | BUS313    | 10   | (only in Norwegian) |  |
|           |         |  |      |        |          |                        |   |        |        | DAT350  | 10                                     | FYS377               | 10      |                  |         | BUS323    | 10   |                     |  |
|           |         |  |      |        |          |                        |   |        |        | IND320  | 10                                     |                      |         | Geomatics        |         | BUS326    | 5    |                     |  |
|           |         |  |      |        |          |                        |   |        |        | INF205  | 5                                      | Biostatistics        |         | GMFM350          | 10      | BUS332    | 10   |                     |  |
|           |         |  |      |        |          |                        |   |        |        | INF250  | 10                                     | BIN300               | 10      | GMGI210          | 10      | BUS340    | 10   |                     |  |
|           |         |  |      |        |          |                        |   |        |        | MLA210  | 10                                     | BIN302               | 10      | GMGI221          | 5       | ECN301    | 10   |                     |  |
|           |         |  |      |        |          |                        |   |        |        | MLA310  | 10                                     | BIN310               | 10      |                  |         | ECN303    | 5    |                     |  |
|           |         |  |      |        |          |                        |   |        |        | STAT200   | 5                                      | BIN315               | 10      |                  |         | INN351    | 5    |                     |  |
|           |         |  |      |        |          |                        |   |        |        | STAT210   | 5                                      |                      |         |                  |         | INN354    | 10   |                     |  |
|           |         |  |      |        |          |                        |   |        |        | STAT340   | 10                                     | Construction         |         |                  |         |           |      |                     |  |
|           |         |  |      |        |          |                        |   |        |        | STAT351   | 10                                     | TBA210               | 10      | (only in Norv    | vegian  |           |      |                     |  |
|           |         |  |      |        |          |                        |   |        |        | STIN300   | 5                                      | TBA331               | 10      |                  |         |           |      |                     |  |

## Notes:

An approved education plan for the study programme contains all mandatory courses and should contain at least 30 ECTS courses on 300-level (master's level). 15 ECTS of the courses on 300-level is covered by the mandatory courses DAT300 and DAT390. The rest should be elected by the student, according to their desired specialization. See possible elective courses in the list above.

## NB!

Due to DAT390 being reduced from originally 10 ECTS to 5 ECTS in the study year 2024/2025, students with admission year 2023 were allowed to choose a customized 10 ECTS version of DAT390 for AUTUMN 2024, or choose the new 5 ECTS version of DAT390 and fill the remaining 5 ECTS with another course on 300-level.