



| No. | Course code | Course title | | S | Type | Active teaching | | | | Other classes | ECTS |
|---|-------------|--------------------------|--|---|------|-----------------|------|-------------|-----------|---------------|-------|
| | | | | | | C | L | R | O | | |
| Year 1 | | | | | | | | | | | |
| 1 | 19.ADA31 | Electives 1 (3 out of 6) | | 1 | | 12.00 | 0.00 | 7.00-9.00 | 0.00-2.00 | 0.00 | 30.00 |
| | | 19.ADA01 | Mathematical foundations of data analysis | 1 | T/M | 4.00 | 0.00 | 3.00 | 0.00 | 0.00 | 10.00 |
| | | 19.ADA02 | Discrete mathematical structures | 1 | T/M | 4.00 | 0.00 | 3.00 | 0.00 | 0.00 | 10.00 |
| | | 19.ADA03 | Analytics and optimization | 1 | T/M | 4.00 | 0.00 | 3.00 | 0.00 | 0.00 | 10.00 |
| | | 19.ADA04 | Introduction to statistical inference | 1 | T/M | 4.00 | 0.00 | 2.00 | 1.00 | 0.00 | 10.00 |
| | | 19.ADA05 | Models of statistical learning | 1 | R | 4.00 | 0.00 | 2.00 | 1.00 | 0.00 | 10.00 |
| | | 19.ADA06 | Introduction to complex networks theory | 1 | R | 4.00 | 0.00 | 3.00 | 0.00 | 0.00 | 10.00 |
| Total classes per week in semester by class type | | | | | | 12.00 | 0.00 | 7.00-9.00 | 0.00-2.00 | 0.00 | |
| Total classes per week and ECTS in semester | | | | | | 21.00 | | | | | 30.00 |
| Total classes per week in semester | | | | | | 21.00 | | | | | |
| 2 | 19.ADA32 | Electives 2 (3 out of 9) | | 2 | | 12.00 | 0.00 | 4.00-9.00 | 0.00-5.00 | 0.00 | 30.00 |
| | | 19.ADA07 | Artificial intelligence / Machine learning | 2 | R | 4.00 | 0.00 | 2.00 | 1.00 | 0.00 | 10.00 |
| | | 19.ADA08 | Programming | 2 | A | 4.00 | 0.00 | 3.00 | 0.00 | 0.00 | 10.00 |
| | | 19.ADA09 | Databases | 2 | A | 4.00 | 0.00 | 0.00 | 3.00 | 0.00 | 10.00 |
| | | 19.ADA10 | Big Data analytics | 2 | A | 4.00 | 0.00 | 2.00 | 1.00 | 0.00 | 10.00 |
| | | 19.ADA11 | Data visualization | 2 | A | 4.00 | 0.00 | 3.00 | 0.00 | 0.00 | 10.00 |
| | | 19.ADA12 | Neural networks and deep learning | 2 | A | 4.00 | 0.00 | 3.00 | 0.00 | 0.00 | 10.00 |
| | | 19.ADA13 | Text mining | 2 | R | 4.00 | 0.00 | 2.00 | 1.00 | 0.00 | 10.00 |
| | | 19.ADA14 | Social network analysis | 2 | R | 4.00 | 0.00 | 3.00 | 0.00 | 0.00 | 10.00 |
| | | 19.ADA15 | Introduction to time series analysis | 2 | T/M | 4.00 | 0.00 | 3.00 | 0.00 | 0.00 | 10.00 |
| Total classes per week in semester by class type | | | | | | 12.00 | 0.00 | 4.00-9.00 | 0.00-5.00 | 0.00 | |
| Total classes per week and ECTS in semester | | | | | | 21.00 | | | | | 30.00 |
| Total classes per week in semester | | | | | | 21.00 | | | | | |
| Total classes per week in semester by class type in academic year | | | | | | 24.00 | 0.00 | 11.00- - | 0.00-7.00 | 0.00 | |
| Total classes per week and ECTS in academic year | | | | | | 42.00 | | | | | 60.00 |
| Total classes per week in academic year | | | | | | 42.00 | | | | | |
| Year 2 | | | | | | | | | | | |
| 3 | 19.ADA33 | Electives 3 (2 out of 7) | | 3 | | 10.00 | 0.00 | 4.00-6.00 | 0.00-2.00 | 0.00 | 14.00 |
| | | 19.ADA16 | Data analysis in fundamental and clinical medicine | 3 | A | 5.00 | 0.00 | 2.00 | 1.00 | 0.00 | 7.00 |
| | | 19.ADA17 | Data analysis in biological sciences | 3 | A | 5.00 | 0.00 | 2.00 | 1.00 | 0.00 | 7.00 |
| | | 19.ADA18 | Big Data and social sciences | 3 | A | 5.00 | 0.00 | 2.00 | 1.00 | 0.00 | 7.00 |
| | | 19.ADA19 | Advanced data analysis in social sciences | 3 | A | 5.00 | 0.00 | 2.00 | 1.00 | 0.00 | 7.00 |
| | | 19.ADA20 | Analysis of international research datasets | 3 | A | 5.00 | 0.00 | 2.00 | 1.00 | 0.00 | 7.00 |
| | | 19.ADA21 | Big Data in space science and its analysis | 3 | A | 5.00 | 0.00 | 3.00 | 0.00 | 0.00 | 7.00 |
| | | 19.ADA22 | Practical analysis of noisy and uneven time series | 3 | A | 5.00 | 0.00 | 3.00 | 0.00 | 0.00 | 7.00 |
| 4 | 19.ADA41 | Internship | | 3 | A | 0.00 | 0.00 | 0.00 | 0.00 | 6.00 | 3.00 |
| 5 | 19.ADA42 | Qualification paper | | 3 | A | 0.00 | 0.00 | 4.00 | 0.00 | 0.00 | 3.00 |
| 6 | 19.ADA43 | Master thesis | | 3 | R | 0.00 | 0.00 | 0.00 | 0.00 | 3.00 | 10.00 |
| Total classes per week in semester by class type | | | | | | 10.00 | 0.00 | 8.00-10.00 | 0.00-2.00 | 9.00 | |
| Total classes per week and ECTS in semester | | | | | | 20.00 | | | | | 30.00 |
| Total classes per week in semester | | | | | | 29.00 | | | | | |
| Total classes per week in semester by class type in academic year | | | | | | 10.00 | 0.00 | 8.00-10.00 | 0.00-2.00 | 9.00 | |
| Total classes per week and ECTS in academic year | | | | | | 20.00 | | | | | 30.00 |
| Total classes per week in academic year | | | | | | 29.00 | | | | | |