



Advanced Data Analytics in Business - Master Course

Learning outcome: *MSc Advanced Data Analytics in Business prepares graduates for a future of data driven and evidence-based decision making. They will learn how to apply the latest academic thinking and analytical and computing tools to facilitate make business decisions, from experienced university teaching staff, as well as visiting professors from European-class universities.*

Although grounded in rigorous technical and quantitative training, our programme is also highly applied. Both core and electives are sector-focused, with a significant share of real-case business problems, giving the opportunity to students to tailor the programme to their interests.

Duration: 2 year (120 ECTS)

| Semester I | | Status | Teachers | Classes | ECTS |
|------------|---|------------|---|---------|------|
| 1. | Programming for Business Applications 1 | Obligatory | Marko Petković, Faculty of sciences and mathematics, Niš Ronald Hochreiter, Vienna University of Economics and Business, Vienna | 30+45 | 8 |
| 2. | Optimization and Business Decision-Making | Obligatory | Jelena J. Stanković, Faculty of Economics, Niš Jason Papathanasiou, University of Macedonia, Department of Business Administration, Thessaloniki | 30+45 | 8 |
| 3. | Elective subject 1 | | | | |
| 4. | Elective subject 2 | | | | |

| List of elective subjects (I semester) | | Teachers | Classes | ECTS |
|--|--|--|---------|------|
| 1. | Mathematics in Business Analysis | Žarko Popović, Faculty of Economics, Niš | 30+45 | 7 |
| 2. | Accounting Information for Decision-Making | Tadija Đukić, Faculty of Economics, Niš Milica Đorđević, Faculty of Economics, Niš Bojana Novičević-Čečević, Faculty of Economics, Niš | 30+45 | 7 |
| 3. | Risk Management | Jelena Z. Stanković, Faculty of Economics, Niš | 30+45 | 7 |
| 4. | Academic Writing | Marija Džunić, Faculty of Economics, Niš | 30+45 | 7 |

| Semester II | | Status | Teachers | Classes | ECTS |
|-------------|--|------------|--|---------|------|
| 1. | Introduction to Machine Learning in Business | Obligatory | Marko Milojković, Faculty of Electronic engineering, Niš | 30+45 | 8 |

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|----|-------------------------|------------|--|-------|---|
| | | | Miroslav Milovanović, Faculty of Electronic engineering, Niš Ronald Hochreiter, Vienna University of Economics and Business, Vienna | | |
| 2. | Time Series Forecasting | Obligatory | Vinko Lepojević, Faculty of Economics, Niš Vesna Janković Milić, Faculty of Economics, Niš | 30+45 | 8 |
| 3. | Elective subject 1 | | | | |
| 4. | Elective subject 2 | | | | |

| List of elective subjects (II semester) | | Teachers | Classes | ECTS |
|---|---|---|---------|------|
| 1. | Research Design and Data Visualization Techniques | Slavoljub Milovanović, Faculty of Economics, Niš Ognjen Radović, Faculty of Economics, Niš Jovica Stanković, Faculty of Economics, Niš | 30+45 | 7 |
| 2. | Marketing Intelligence | Vinko Lepojević, Faculty of Economics, Niš Vesna Janković Milić, Faculty of Economics, Niš | 30+45 | 7 |
| 3. | Advanced Big Data Analytics | Ognjen Radović, Faculty of Economics, Niš Jovica Stanković, Faculty of Economics, Niš Alessio Farcomeni, University Tor Vergata, Faculty of Economics, Roma | 30+45 | 7 |
| 4. | Methods of Statistical Analysis | Vinko Lepojević, Faculty of Economics, Niš Vesna Janković Milić, Faculty of Economics, Niš | 30+45 | 7 |

| Semester III | | Status | Teachers | Classes | ECTS |
|--------------|----------------------|------------|---|---------|------|
| 1. | Applied Econometrics | Obligatory | Žarko Popović, Faculty of Economics, Niš Jelena J. Stanković, Faculty of Economics, Niš Ivana Marjanović, Faculty of Economics, Niš | 30+45 | 8 |
| 2. | Quantitative Finance | Obligatory | Srdan Marinković, Faculty of Economics, Niš Mirjana Jemović, Faculty of Economics, Niš Jelena Radojčić, Faculty of Economics, Niš Jelena Z. Stanković, Faculty of Economics, Niš | 30+45 | 8 |
| 3. | Elective subject 1 | | | | |

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|----|--------------------|
| 4. | Elective subject 2 |
|----|--------------------|

| List of elective subjects (III semestar) | | Teachers | Classes | ECTS |
|--|---|---|---------|------|
| 1. | Programming for Business Applications 2 | Marko Petković, Faculty of sciences and mathematics, Niš Jovica Stanković, Faculty of Economics, Niš Ronald Hochreiter, Vienna University of Economics and Business, Vienna | 30+45 | 7 |
| 2. | Online Business and Web Analytics | Marko Milojković, Faculty of Electronic engineering, Niš Miroslav Milovanović, Faculty of Electronic engineering, Niš | 30+45 | 7 |
| 3. | Data Acquisition in Business Intelligence | Ognjen Radović, Faculty of Economics, Niš Jovica Stanković, Faculty of Economics, Niš | 30+45 | 7 |
| 4. | Business Process Managemet | Marija Radosavljević, Faculty of Economics, Niš | 30+45 | 7 |

| Semester IV | | SIR | ECTS |
|-------------|---|-----|------|
| 1. | Obligatory Professional Practice in Companies | 30 | 3 |
| 2. | Final Exam - Subject | 100 | 10 |
| 3. | Final Exam | 170 | 17 |