Applied Statistics programme at University of Belgrade

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Applied Statistics programme at University of Belgrade

- Probability, Statistics, Time series analysis, ANOVA… at University of Belgrade
- Master studies – 1 year, 60 ECTS
- Applied Statistics – Academic Master Studies

Master studies in statistics – Faculty of mathematics

- 60 ECTS
- 3 subjects + master thesis:
- Selected topics
  - Random processes
  - Financial mathematics
  - Measure theory

Introduction

- The goal of this curriculum is to give students a complete insight into various different fields of social and natural sciences, aiming to educate future experts who will be able to plan and conduct statistical research. That is to say, we wish to have our students understand statistical procedures, apply them and make correct conclusions according to the research they conducted.

Introduction

- First semester currently offers 3 optional subject, but we hope that there will be more in the future. Through these subjects, students get acknowledged with certain topics in social and natural sciences, in those areas where statistical methods are applied. Further courses gradually develop students' insight into these sciences and statistical methods that are used during research.

Introduction

- All subjects are accompanied with theoretical basics, enabling students to understand the essence of methods in question, and limitations in their applications.
- Master thesis should be based on a concrete problem from a selected field and work with real data

Basic Information

- Interdisciplinary field of science and education
- 120 ECTS credits
- Two school years
  - First year is preparatory
- Students receive the title of „Master of Applied Statistics“
- Planned number of students: 20
- Instruction in Serbian

About the Curriculum

- The entire curriculum has been constructed according to similar curricula in other European high education institutions, and its contents and methodology were developed on a TEMPUS project (*511140-TEMPUS-1-2010-1-RS-TEMPUS-JPCR, Master programme in Applied Statistics*) in cooperation with six European universities, National Bank of Serbia and the State Statistical Institute.

About the Project

- **M**aster programme in **A**pplied **S**tatistics
- Universities from Serbia: Novi Sad, Belgrade, Niš, Kragujevac, Novi Pazar
- National Bank of Serbia, Statistical Institute
- Belgrade University: Faculty of Philosophy (Psychology dept.), Faculty of Mathematics, Faculty of Medicine, Faculty of Agriculture
- European partners: Slovenia, Italy, Spain, Austria, Hungary and Slovakia

Significance and Advantages

- Development of team work
- Professional practice
- Possibility to choose subjects from other study programs
- Wide spectre of statistical methods
- Has no equivalent in other master programs at Belgrade University
- Contemporary need for good statisticians

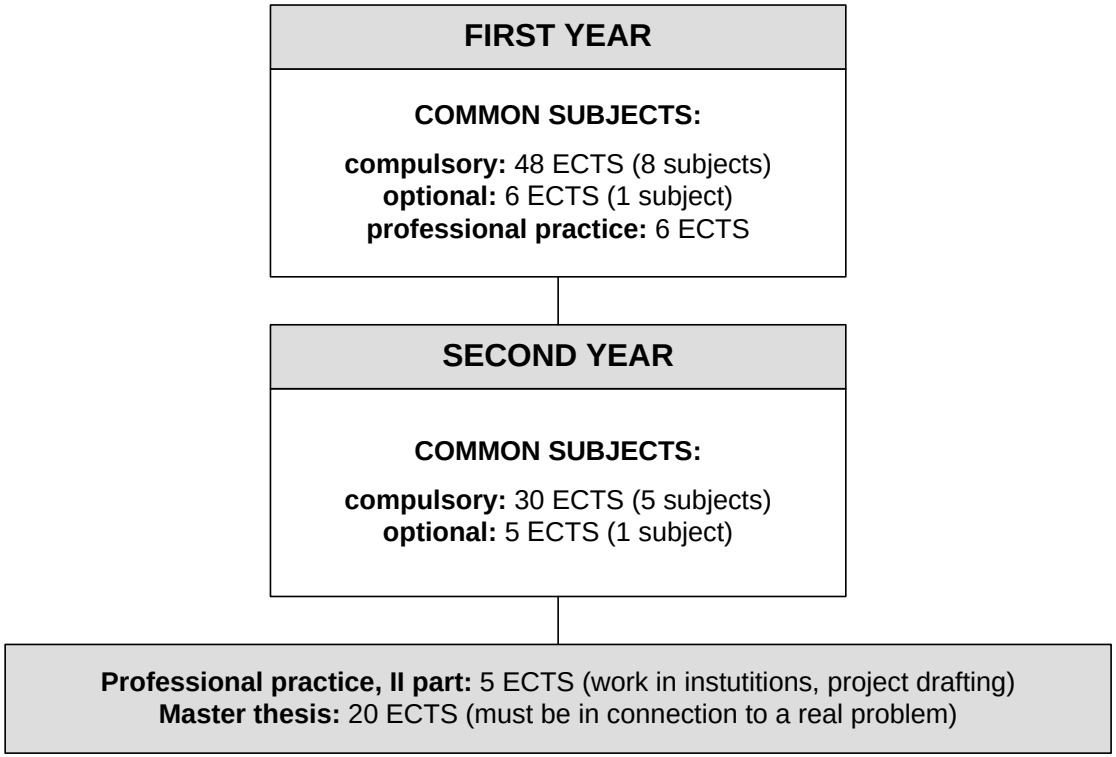
Recommendations

- Study program was recommended by
  - Miladin Kovačević, PhD, Statistical Institute/National Bank of Serbia
  - Srđan Bogosavljević, PhD, Ipsos Strategic Marketing
- Contemporary society needs experts in statistics who will be able to solve problems from different scientific fields by applying complex contemporary statistical methods and models, and this curriculum makes that possible by giving students all the necessary skills for independent research, work and decision making.

Other Curricula in Applied Statistics

- Katholieke Universiteit Leuven (Belgium): http://lstat.kuleuven.be/masterBologna/index.htm; Leuven.pdf
- Universiteit Gent (Belgium): http://www.mastat.ugent.be/; Gent.pdf
- Georg-August-Universität Göttingen (Germany): http://zfs.uni-goettingen.de/index.php?id=14
- Cornell University (USA): http://www.stat.cornell.edu/mps/
- University of Manchester (United Kingdom): http://www.ccsr.ac.uk/masters/ProgAims.htm; Manchester.pdf
- University of Oxford (United Kingdom): http://www.stats.ox.ac.uk/prospective_students/msc_in_applied_statistics; Oxford.pdf
- Master of Science ETH in Statistics (Suisse): http://stat.ethz.ch/education/master
- University of Ljubljana: http://www.uni-lj.si

Structure of the Curriculum



First Semester

- C11 Statistics I (2+2)
- C12 Statistical Software I (0+4)
- C13 Mathematics – Selected Topics (2+2)
- C14 Methodology of Data Collection in Social and Medical Sciences (2+2)
- O11 Psychology and Sociology – Selected Topics (2+2)
- O12 Biotechnical Sciences – Selected Topics (2+2)
- O13 Medical Sciences – Selected Topics (2+2)

Second Semester

- C21 Statistics II (2+2)
- C22 Statistical Software II (0+4)
- C23 Methodology of Data Collection in Natural and Technical Sciences (2+2)
- C24 Official Statistics (2+2)
- PP1 Professional Practice I – Academic skills (2+2)

Third Semester

- C31 Statistics III (2+2)
- C32 Sample Theory and Experiment Planning (2+2)
- C33 Statistical Methods in Social Sciences (2+2)
- C34 Statistical Methods in Biotechnical Sciences (2+2)
- C35 Statistical Methods in Medical Sciences (2+2)

Fourth Semester

- O41 Statistics IV (2+2)
- O42 Statistical Methods in Social Sciences II (2+2)
- O43 Statistical Methods in Biotechnical Sciences II (2+2)
- O44 Statistical Methods in Medical Sciences II (2+2)
- PP2 Professional Practice – Practice in institutions and project drafting (5 ECTS)
- Master Thesis (20 ECTS)

Goals

- Correct application of statistical software and statistical procedures
- Necessary skills for independent reasearch
- Necessary skills for team work
- Systematic and well-rounded knowledge