|  |  |  |  |
| --- | --- | --- | --- |
| Title of the course | **Business Analytics** | | |
| Title of the Academic Programme | BA “Sociology and Social Informatics” | | |
| Type of Course | Elective | | |
| Prerequisites | Information systems. First course in programming and/or data analysis. | | |
| ECTS workload | 3 | | |
| Total indicative study hours | Directed Study | Self-directed study | Total |
| 28 | 200 | 228 |
| Course Overview | The course extends students’ skills of data analysis and discusses their applications to typical tasks of customer and service areas of business analytics. The course is targeted to those aiming at business-oriented jobs (web, marketing, UX, sales, media and service analytics, etc.), and requires a **large amount of independent study**.  We will discuss how to build analytics models helping to:   * predict customer lifetime value * assess probability of customer leaving the company * group your customers according to their behavior and business metrics * analyze customer journeys based on log data, and * design and analyze simple customer satisfaction surveys.   We will go through 3-4 cases where business analytics tasks can be solved by research instruments and data analysis approaches. We will discuss these cases, practice analysis methods, and look at business context of the case. We will review basic linear and logistic regression, and then look at the methods of dimension reduction and clustering, and Bayesian networks.  While you will have an opportunity to review basic concepts of data analysis if a bit rusty, you should be ready to move at quick pace.  Compared to the previous year course on the similar topic, we add discussion of usability models and expand practical part including coverage of probabilistic (Bayesian) models which help to integrate different types of data and complex relationships between them into easy-to-use decision model. You can build on your previous level knowledge in order to dive deeper in your topics of interest. | | |
| Intended Learning Outcomes (ILO) | The course is aimed to help students to apply appropriate methods and concepts they learn in data analysis, research methodology and other courses in real project setting. | | |
| Indicative Course Content | Profiling Customers. Segmentation. Clustering.  Customer Lifecycle and Churn  Choice and Market Baskets. Association Rules and Recommendations  Customer Decisions. Customer Satisfaction Scales and Surveys  Predictive Analytics | | |
| Readings / Indicative Learning Resources | Blattberg, Robert C., Byung-Do Kim, and Scott A. Neslin. Database Marketing. Vol. 18. International Series in Quantitative Marketing. New York, NY: Springer New York, 2008. <http://link.springer.com/10.1007/978-0-387-72579-6>.  Chapman, Christopher N., and Elea McDonnell Feit. R for Marketing Research and Analytics. Use R! Springer International Publishing, 2015. [www.springer.com/us/book/9783319144351](http://www.springer.com/us/book/9783319144351).  Payne A, Frow P, Eggert A. The customer value proposition: evolution, development, and application in marketing. Journal of the Academy of Marketing Science. 2017;45(4):467-489. doi:10.1007/s11747-017-0523-z. <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=123386312>.  Provost, Foster, and Tom Fawcett. Data Science for Business: What You Need to Know about Data Mining and Data-Analytic Thinking, O'Reilly Media, Incorporated, 2013. <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=1323973>. | | |
| Course Instructor | Anna Shirokanova PhD (Sociology), Alena Suvorova PhD (Computer Science), Ilya Musabirov MA MSc | | |