**FACULTY OF INFORMATICS (THIRD YEAR)**

| Sixth semester | | Credits |
|---|---|---|
| | Title of the subject | ECTS |
| **1** | Distributed computer systems | 7 |
| **2** | Advanced algorithms | 6 |
| **3** | Practical classes * | 2 |
| | Elective courses (2 of 4): | |
| | Numerical methods and linear programming | 5 |
| | High performance calculation | 5 |
| | E-commerce | 5 |
| | Mobile Platforms and Programming | 5 |
| | *Elective subject from the offered electives from a university list of electives* | |
| | | 5 |
| **Total** | | **30** |

| Literature | |
|---|---|
| **Subject** | **Literature** |
| **Distributed computer systems** | *Distributed systems: principles and paradigms,* A. Tanenbaum, Prentice Hall, 2010 *Distributed Systems: Concepts and Design,* G. Coulouris, Pearson, 2012 |
| **Advanced algorithms** | *Data Structures and Algorithm Analysis in C++, 4th Edition,* Mark A. Weiss, Pearson, 2014 *Network Flows: Theory, Algorithms, and Applications,* James B. Orlin, Ravindra K. Ahuja, and Thomas L. Magnanti, Pearson, 1993 |
| **Numerical methods and linear programming** | *Numerical optimization, 2nd edition,* J. Nocedal, S. R. Wright, Springer-Verlag New York Inc, 2006 *Elements of numerical mathematics, B. Trpenovski, N. Celakoski, UKIM, 1987 Theory and methods of linear program., D. L. Karchitska, UKIM, 1987* |
| **High performance calculation** | *High-Performance Parallel Computing,* Duane Storti Mete Yurtoglu, Addison Wisley, 2016 **High Performance Cluster Computing**, Rajkumar Buyya, Prentice Hall, 1999 |

| | |
|---|---|
| **E-commerce** | ***E-Commerce 2018, 14/E,*** Kenneth C. Laudon, New York University Carol Guercio Traver, Pearson, 2018 |
| **Mobile Platforms and Programming** | ***Programming Android: Java Programming for the New Generation of Mobile Devices, 2 nd ed.,*** Zigurd Mednieks, Laird Dornin, G. Blake Meike, Masumi Nakamura, O-Reilly Media, 2012 |

\* The student has the right, on the basis of the realized practicalities, to prepare a Final Project which publicly defends after the fulfillment of all obligations from the first three years and, in such case, ends the education and acquires the title:

Software Engineer