**STRUCTURE OF THE TWO YEAR STUDY PROGRAM ON SOFTWARE ENGINEERING,**

**SECOND CYCLE OF STUDIES WITH 120 ECTS**

| | Seventh semester | |
|---|---|---|
| | **Title of the subject** | **Credits ECTS** |
| **1** | IP design | **6** |
| **2** | Software design and testing | **6** |
| **3** | Databases 2 | **6** |
| | Elective courses (2 of 4): | |
| | Web programming | **6** |
| | Web programming 2 | **6** |
| | Microprocessor systems | **6** |
| | Random processes | **6** |
| | IT security policies and procedures | **6** |
| | Total | **30** |

| Literature | |
|---|---|
| **Subject** | **Literature** |
| **IP design** | *Software Engineering, Ian Somerville, Prosvetno Posestvo AD Skopje, 2009* |
| **Software design and testing** | *Designing Software Architectures: A Practical Approach,* H. Cervantes, Addison Wisley, 2016 *Exploratory Software Testing: Tips, Tricks,* James A. Whittaker, Addison Wisley, 2010 |
| **Databases 2** | *Database System Concepts,* Silberschatz A., Korth H, Sundershan S., McGraw-Hill, 1996 *Microsoft SQL Server 2012 T-Sql Fundamentals,* Itzik Ben-Gan, Dreamtech Press, 2012 *Oracle Database 12c The Complete Reference,* Bob Bryla, Kevin Loney, McGraw-Hill Education; 1 edition, 2013 |
| **Web programming** | *C# 7.1 and .NET Core 2.0 - Modern Cross-Platform Development - Third Edition: Create powerful applications with .NET Standard 2.0,* |

| | |
|---|---|
| | ***ASP.NET Core 2.0, ... Visual Studio 2017 or Visual Studio Code,*** Mark J. Price, Packt Publishing, 2017 |
| **Web programming 2** | ***C# 7.1 and .NET Core 2.0 - Modern Cross-Platform Development - Third Edition: Create powerful applications with .NET Standard 2.0, ASP.NET Core 2.0, ... Visual Studio 2017 or Visual Studio Code***, Mark J. Price, Packt Publishing, 2017 |
| **Microprocessor systems** | ***8088 and 8086 Microprocessors, The: Programming, Interfacing, Software, Hardware,*** Walter Triebel, A. Singh, Pearson, 2003<br>***Introduction to Microprocessor Based Systems Using the ARM,*** Kris Schindler, Pearson, 2013 |
| **Random processes** | ***Probability and Statistics with Reliability, Queuing, and Computer Science Applications, Second Edition,*** Kishor Trivedi, John Wiley and Sons, New York, 2001<br>***Fundamentals of Applied Probability and Random Processes***, Oliver C. Ibe, Elsevier, 2005<br>***Discovering statistics using SPSS,*** A. Field, SAGE Publications, 2005 |
| **IT security policies and procedures** | ***Information security policies and procedures: A practitioner's reference (2nd ed.),*** Peltier, T. R., Auerbach Publications, New York, NY/London, 2004<br>***Security Program and Policies: Principles and Practices, 2/E***, Sari Greene, Pearson IT Certification, 2014<br>***Computer Security, Dieter Golman, Adverb, 2010*** |