| Óbuda University<br>Bánki Donát Faculty of Mechanical and Safety<br>Engineering   |   |                            | Insitute of Mechatronics and Vehicle Engineering |                    |                |  |  |  |  |
|---|---|----------------------------|--|--------------------|----------------|--|--|--|--|
|   | Subject title and code:     IT Networks BMXIHY6BNE     Credits: 3 |                            |  |                    |                |  |  |  |  |
| Full-time study 2023-2024 ac. 2 semester  |   |                            |  |                    |                |  |  |  |  |
| vear  |   |                            |  |                    |                |  |  |  |  |
| The course is available at: mechatronical engineering   |   |                            |  |                    |                |  |  |  |  |
|   |   |                            |  |                    |                |  |  |  |  |
|   |   |                            |  |                    |                |  |  |  |  |
| Prerequisite (neptun code):     Informatics I, BMXIA1HBNE   |   |                            |  |                    |                |  |  |  |  |
| Weekly number of lessonsLecture:1Group seminar:Lab:2Consultation:   |   |                            |  |                    |                |  |  |  |  |
| Way of assessment: Midterm (Written)<br>mark  |   |                            |  |                    |                |  |  |  |  |
| Online consul   | <b>tation</b> (in case it's i                                     |                            | BBB link)  |                    |                |  |  |  |  |
| Edu. goal:  | Students learn ab   | out the structure          | and working prin                                 | ciples of computer | networks. They |  |  |  |  |
| <b>Edu. goal</b> : Students learn about the structure and working principles of computer networks. They acquire knowledge about TCP/IP protocol implementing principles, the structure of the             |   |                            |  |                    |                |  |  |  |  |
| Internet, and the functioning of the user protocols providing basic Internet services.  |   |                            |  |                    |                |  |  |  |  |
|   | · · · · · · · · · · · · · · · · · · ·                             | 0.1                        | hedule   |                    |                |  |  |  |  |
| Education Topics  |   |                            |  |                    |                |  |  |  |  |
| week  |   |                            | Topics   |                    |                |  |  |  |  |
| 1.  | Network Overview  |                            |  |                    |                |  |  |  |  |
|   |   |                            |  |                    |                |  |  |  |  |
| 2.  | Media Transmission and Network Devices                            |                            |  |                    |                |  |  |  |  |
| 3.  | OSI and TCP/IP Model  |                            |  |                    |                |  |  |  |  |
| 4.  | IP v4 and IP v6   |                            |  |                    |                |  |  |  |  |
| 5.  | Designing a network/ Homework Assignment                          |                            |  |                    |                |  |  |  |  |
| 6.  | Test I  |                            |  |                    |                |  |  |  |  |
| 7.  | DHCP  |                            |  |                    |                |  |  |  |  |
| 8.  | Internet Control Message Protocol-ICMP                            |                            |  |                    |                |  |  |  |  |
| 9.  | TCP vs UDP  |                            |  |                    |                |  |  |  |  |
| 10.   | DNS, World Wide Web   |                            |  |                    |                |  |  |  |  |
| 11.   | Rectoral Break  |                            |  |                    |                |  |  |  |  |
| 12.   | Holiday   |                            |  |                    |                |  |  |  |  |
| 13.   | Test II   |                            |  |                    |                |  |  |  |  |
|   | Test Retake   |                            |  |                    |                |  |  |  |  |
| 14.   | Test Relake   |                            | • •  |                    |                |  |  |  |  |
|   |   | Mid-semest                 | er requirements                                  |                    |                |  |  |  |  |
| Test  |   | Assignment to be submitted |  | Lab measurement    |                |  |  |  |  |
| amount  | dates   | amount                     | deadlines  | amount             | dates          |  |  |  |  |
| 2   | 20-03-2024,<br>08-05-2024   | 1                          | 08-05-2024                                       | 1                  | 08-05-2024     |  |  |  |  |
| According to t  | he TVSZ attendance  | e of group semina          | rs and lab exercises                             | s are mandatory.   |                |  |  |  |  |
| According to the TVSZ attendance of group seminars and lab exercises are mandatory.<br>Other requirements for participation in sessions not covered by the regulations and restrictions on substitutions: |   |                            |  |                    |                |  |  |  |  |
| Test Assi   |   | Assignment t               | to be submitted Lab measurement                  |                    | urement        |  |  |  |  |
| maximum   | minimum score   | maximum                    | minimum score                                    | maximum points     | minimum        |  |  |  |  |
| points  | required to pass  | points available           | required to pass /                               | available          | score required |  |  |  |  |
| available   | /test   |                            | assignment                                       | available          | to pass /lab   |  |  |  |  |
| 70points  | points  | 30points                   | points   | points             | points         |  |  |  |  |
| · · · P · · · · · ·   |   | - sponto                   | ····P ······s                                    | ··· P • ···· S     | pomb           |  |  |  |  |

Total number of points achievable in semester: 100points

| Grading                                     | satisfactory   | average        | good          | excellent           |  |  |
|---|----------------|----------------|---------------|---------------------|--|--|
| thresholds                                  | 70 points and  | 60- points and | 80 points and | 90 points and above |  |  |
|   | above          | above          | above         |                     |  |  |
| Other evaluation cr                         | iteria:        |                |               |                     |  |  |
|   |                |                |               |                     |  |  |
| Receive a signatur                          | e              |                |               |                     |  |  |
| denied entry:                               |                |                |               |                     |  |  |
| Required references: Slides of the lectures |                |                |               |                     |  |  |
| Recommended                                 |                |                |               |                     |  |  |
| references:                                 |                |                |               |                     |  |  |
| Quality assurance                           | methods of the |                |               |                     |  |  |
| subject:                                    |                |                |               |                     |  |  |

Things, that are not included, can be found within the regulations of Óbuda University.