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| Óbudai University**Donát Bánki Faculty of Mechanical and Safety Engineering** | **Institute of Mechatronics and Vehicle Engineering** |
| **Course name and Neptun-code: Informatics I. (BGRIA1HNEC) Credits: 3**Full time, 1st Semester of the Academic year 2014/15.  |
| Faculties in which the subject is taught: **BSc in Mechatronics**  |
| Supervised by: **Tóthné Laufer Edit** |  |  |  |
| Prerequisites conditions: (Neptun Codes) | **-** |
| Lessons per week:  | Theory: **2** | Practice (in Auditorium): **0**  | Lab: **0** | Consultation:  |
| Exam type (s,v,f): | **v** |
| **The Syllabus** |
| **Aim:** Give an overview about the basic tools of Informatics, which are needed during engineering work.  |
| **Schedule** |
| Weeks | Topics |
| 1. | The role of the informatics during engineering work. Software and hardware (necessary at engineering work) selection criterias.  |
| 2. | The concept and quantity of information. Information representation on digital media. Storage. Binary number system. |
| 3. | Information coding. Binary, octal, hexadecimal. BCD, ASCII, Unicode. |
| 4. | Information transmission. Noisy and noiseless channel. Error detecting and correcting. |
| 5. | Redundancy. Compression. RAID. |
| 6. | Test paper I. |
| 7. | Operating systems |
| 8. | Basic concepts of computer network. Internet, intranet. |
| 9. | WiFi and mobil communication. Cloud computing. Information sharing. |
| 10. | Information protection. Cryptography. |
| 11. | Holiday |
| 12. | Computer malware. |
| 13. | Test paper II.  |
| 14. | Substitunional test paper  |
| **Requirements**  |
| Weeks | Test papers |
| 6 | Test paper I. |
| 13 | Test paper II. |
| 14 | Substitunional test paper |
| *The evaluation criterias* |
| The participation is governed by TVSZ III.23.§ (1)-(4).All main areas of the course are evaluated by test papers. The course is to be considered successfully executed and a **signature** is obtained if and only if both test papers are written. Based on the Study Regulations III.6.(4), the student receive **offered grade** if he/she has written both test papers with grades higher than 3. All matters which are not covered in this document, the Study and Examination Rules and the provisions of the Study Regulations, valid at Óbuda University, prevails.  |
| The semester closing method (method of examination: written, oral, testing, etc.). |
| Written exam |
| **Literature:** lecture notes |
| **Quality Assurance:** using feedback provided by the students for improving content and methods of teaching of the subject. |

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 tantárgyfelelős főigazgató