

Óbudai University		Institute of Mechatronics and Vehicle Engineering		
Donát Bánki Faculty of Mechanical and Safety Engineering		Engineering		
Course name and Neptun-code: Informatics I, BMXI1EHBNE				Credits: 3
<i>Full time, 1st Semester of the Academic year 2018/19.</i>				
Faculties in which the subject is taught: BSc in Mechatronics				
Supervised by: Tóthné Dr. Laufer Edit		Lecturers: Tóthné Dr. Laufer Edit, Nguyen Huu Phuoc Dai		
Prerequisites conditions: (Neptun Codes)				
Lessons per week:	Theory: 2	Practice (in Auditorium): 0	Lab: 0	Consultation:
Exam type (s,v,f):	exam			
The Syllabus				
Aim: Give an overview about the basic tools of Informatics, which are needed during engineering work.				
Schedule				
Weeks	Topics			
1.	Concept of informatics. Emergence, development trends. Basic concepts of informatics. Concept, and quantity of information.			
2.	Concept of entropy. Searching theory. Concept of redundancy.			
3.	Information coding. Code tree. Prefix code. Variable code length.			
4.	Statistics-based data compression.			
5.	Heuristic information-based methods.			
6.	Number systems. Transformation between number systems. Negative numbers. Real numbers. Operations.			
7.	Test paper I.			
8.	Operating systems.			
9.	Basic concepts of coputer network. Internet. WiFi and mobile communication.			
10.	Information sharing. Web pages. Social networks. Scientific Student Conference			
11.	Holiday			
12.	Computer malware. Information protection.			
13.	Test paper II.			
14.	Retake			
Requirements				
Weeks	Test papers			
7	Test paper I.			
13	Test paper II.			
14	Retake			
<i>The evaluation criterias</i>				
The participation is regulated by Study Regulations III.23.§ (1)-(4).				
All main areas of the course are evaluated by test papers. The course is to be considered successfully completed if and only if both tests are written, as a prerequisite for obtaining a signature .				
Based on the Study Regulations III.6.(4), the student may receive an offered grade if they have written both tests with a grade 2 and their overall course average is 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: Moodle				
Quality Assurance:				