

Óbudai University		Institute of Mechatronics and Vehicle Engineering		
Donát Bánki Faculty of Mechanical and Safety Engineering		Engineering		
Course name and Neptun-code: Informatics I. BGRIA1ENND, BGRIA1KTNC				Credits: 3
<i>Full time, 2nd Semester of the Academic year 2016/17.</i>				
Faculties in which the subject is taught: BSc in Mechatronics				
Supervised by: Tóthné Dr. 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.	Concept, and quantity of information. Concept of entropy.			
3.	Searching theory. Information coding. Code tree. Prefix code.			
4.	Variable code length. Optimal code criteria. Methods based on heuristic information.			
5.	Number systems. Transformation between number systems. Numeric and alphanumeric codes.			
6.	Negative numbers. Real numbers. Operations.			
7.	Test paper I.			
8.	Operating systems.			
9.	Basic concepts of computer network. Internet.			
10.	WiFi and mobile communication. Cloud computing. Information sharing.			
11.	Web pages. Social networks.			
12.	Computer malware. Information protection.			
13.	Test paper II.			
14.	Substitutional test paper			
Requirements				
Weeks	Test papers			
8	Test paper I.			
13	Test paper II.			
14	Substitutional test paper			
<i>The evaluation criterias</i>				
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:				