Óbuda University	
Kandó Kálmán Faculty of Electrical Engineering	Institute of Microelectronics and Technology

Name and code of subject: **Interfaces, KMEIF1ETND**	**Credits***: 3*

Full-time course, spring semester

Course: Electrical engineering

Responsible:	**Dr. Horváth Zsolt József**	Lecturer:	**Horváth Márk**

Prerequisites:				

Contact hours per week:	Lecture: 1	Class discussion:	Laboratory: 1	Consultation:

Evaluation:	**mid semester grade**

<div align="center">

Subject description

</div>

The aim is to build a basic knowledge of microprocessor and microcontroller systems and simple data transfer methods.

Topics	**Week**	**Lessons**
Basic principles of computers and microprocessors.	**1.**	**2**
Structure and operation of a microprocessor.	**2.**	**2**
Structure and operation of a basic computer.	**3.**	**2**
Programming of microprocessor systems; numer systems and data formats.	**4.**	**2**
About some programming mistakes.	**5.**	**2**
Basics of information theory and data transfer.	**6.**	**2**
Line coding (baseband coding) methods.	**7.**	**2**
Serial communication methods.	**8.**	**2**
Basics of optical and radio communication.	**9.**	**2**
Basics of computer networks.	**10.**	**2**
Basics of microcontrollers.	**11.**	**2**
Basics and details of 8b PIC microcontrollers. Programming practice.	**12.**	**2**
Graphical programming enviroment: Labview	**13.**	**2**
Test.	**14.**	**2**

<div align="center">

Assessment and evaluation

</div>

The attendance of lectures is mandatory. A test is written in the last week from the whole semester's material.

<div align="center">

Recommended literature:

</div>

http://mti.kvk.uni-obuda.hu/node/168
Andrew S. Tanenbaum: Computer Networks
Andrew S. Tanenbaum: Structured Computer Organization