Title of the course: **Theory and measurement of color**	***NEPTUN-code:*** RMKMC1ABNE	***Weekly teaching hours:*** *2+0+0*	***Credit:*** 2 ***Exam type****:*

Course leader: Dr. Borbély Ákos	***Position:*** associate professor	***Required preliminary knowledge:*** -

Curriculum:

The aim of the course is to introduce students to the physical, physiological, and psychophysical fundamentals of color, color communication, the basic principles of color systems, and color measurement methods and instruments, as well as to provide a comprehensive overview of the application of color theory and colorimetry in the printing industry. After learning the theoretical basics, students will meet the the possibilities of color measurement in the framework of demonstration lectures. An additional goal of this English-language course is to practice engineering terminology and develop professional communication skills.

Curriculum Description:

Topics of lectures and practices:

Week of Semester	Topic
1.	The importance of color in everyday life; definition of color stimuli, percieved color,
2.	Optical radiation, types of spectra, light-material interaction
3.	Introduction to radiometry and photometry
4.	Human color vision
5.	Color order systems
6.	CIE colorimetry
7.	CIE colorimetry
8.	Light sources
9.	Color related visual phenomena, chromatic adaptation
10.	Color measurement demonstration
11.	Color measurement demonstration
12.	Standard color management
13.	Test
14.	Supplementary test

Mid-semester requirements:
Attendance:
Required.
Test papers, measurement records, reports, etc. (number, date)
Methods of qualification:
Midterm assessment takes the form of a 60-minute exam during the semester. A retake exam will be offered during the last week of the semester. A minimum of 50% must be achieved to obtain a signature. Students who have not obtained a signature by the end of the semester may attempt to do so once during the exam period. In this case, the exam will cover the entire semester's material. The date will be determined at a later time.
Professional competencies:
Literature:
• EDT-Jegyzet: Dr. Borbély Ákos: Színtan és színmérés 6058 • Schanda J. (ed.): Colorimetry: Understanding the CIE System John Wiley & Sons, 2007