

Course title: Telecommunication in Control Engineering	Neptun code: GEVAU415-a
Course coordinator: Dr. Attila Károly Varga, PhD, associate professor	
type of lesson and number of lessons: lecture (2)	
method of evaluation: colloquium	
curriculum location of the subject: (autumn/spring semester): autumn and spring	
pre-study conditions (<i>if any</i>): -	
The task and purpose of the subject:	
The aim of the course is to acquaint the students with the integration of modern telecommunication systems, protocols and technologies into control systems and the applications based on them.	
Course description:	
The curriculum of the course covers the following areas: analogue and digital communication systems, signal transmission methods, channel coding, control fundamentals and methods, data transmission and network protocols, wired and wireless communication standards, IoT, smart solutions, telecommunication and control trends and applications.	
Required literature:	
<ol style="list-style-type: none"> 1. Marcelo S. Alencar , Valdemar C. da Rocha Jr.: Communication Systems, Springer Cham, 2022, eBook ISBN 978-3-031-12067-1 2. Bogdan M. Wilamoeski, J. David Irwin: Industrial Communication Systems Taylor & Francis Inc, 2011, ISBN 9781439802816 	
Recommended literature:	
<ol style="list-style-type: none"> 1. Yuriy P. Kondratenko, Vsevolod M. Kuntsevich, Arkadii A. Chikrii, Vyacheslav F. Gubarev: Advanced Control Systems Theory and Applications, River Publishers, 2021, ISBN 9788770223416 2. Sharma Harish: Communication and Intelligent Systems, Proceedings of Iccis 2022, Volume 1, Springer Nature, ISBN 9789819920990 	