Winter semester

Name of subject	Field of study	Form of classes	ECTS points	Short summary	Obligatory ?
Process automation equipment	Automation and robotics	Lecture Laboratory	5	The course covers problems associated to harware and software of automation devices.	Yes
Electric Drive and Power Electronics Basics	Electrical Engineering	Lecture Project class Laboratory class	6	Fundamentals of Electric Drive and Power Electronics. Electromechanical system. Construction and operation of industrial drive systems with electric motors - basic issues. Basic power electronics systems. Control of DC and AC motors. Static (mechanical) and dynamic characteristics. Mathematical models of electric drives.	Yes

Databases	Computer science	computer laboratory class, lecture	5	Introduction to databases; Foundation of relational; model; Algebraic operations in relational model; Foundations of SQL; Introduction to database design; Procedural programming in databases; Concurrency and transactions in databases. Database optimization and tuning; Database tools.	Yes

Big Data and Data Warehouses	Computer science	computer laboratory class, lecture	4	Fundamental concepts of data warehouse and big data processing systems; Operational and analytical processing; Designing a data warehouse; Architectures of collecting big data sets; Big Data models; Methods of obtaining and processing large data sets; Advanced elements of the SQL language in data processing; Classical statistical methods in data analysis; Artificial intelligence methods in data processing; Data mining; Methods of representation and processing of knowledge.	Yes

Big Data and Distributed Processing	Computer science	computer laboratory class, lecture	4	Architectures of collecting big data sets; Big Data data models; Methods of obtaining and processing large data sets; Distributed processing and data stream processing in Big Data systems; Fundamental concepts of data warehouse and big data processing systems; Operational and analytical processing; Advanced elements of the SQL language in data processing; Classical statistical methods in data analysis; Artificial intelligence methods in data processing; Data mining; Methods of representation and processing of knowledge.	Yes