Course Unit Descriptor

Study Programme: Computing And Control Engineering

Course Unit Title: Design of automatic control system

Course Unit Code: AU44

Name of Lecturer(s): Kulić Filip

Type and Level of Studies: bachelor

Course Status (compulsory/elective): elective

Semester (winter/ summer): winter

Language of instruction: english

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated: 4

Prerequisites: none

Course Aims:.

Students gain knowledge about the basic principles of designing automatic control systems and forming design documentation in accordance with the current rules and legal regulations and bases of automatic control in the field of power engineering.

Learning Outcomes:
The acquired knowledge can be used in solving practical engineering problems and form the basis for future professional courses.

Syllabus.
Introduction (problem definition, project task, types of projects and their content: feasibility study, concept, general, main, executive, project revision, design regulations and recommendations). Standards (structure and content of standards related to project development and project documentation in electrical engineering, mechanical engineering and processing industry, national and important international standards: SRPS, ANSI, ISA, IEEE, IEC, DIN, VDE…) Technical documentation(standard graphic symbols, labels, schemes, diagrams, tables). Modern software for developing technical documentation(E-plan, AUTOCAD, MS Project…). Supervision and execution. Development of a practical project related to particular problem (processing industry, electric motor drive, water distribution system (hot/cold water), electric power, gas, transportation system…) Occupation health protection, protection against electric shock in industry. Actuators in industry, physical properties and environment characteristics. Application of automatic control systems in machine drives in industrial plants. Design on modern control systems in industry.

Required Reading:
Relevant literature in English, tbd

Weekly Contact Hours: 2	**Lectures: 4**	**Practical work: 0**

Teaching Methods:
Lectures; Computer - laboratory practice. Consultations. The exam is written and oral, with the written part being prerequisite for the oral. The final grade is formed on the bases of achievements at the colloquium, homework assignment and the written and oral part of the exam.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Attendance			
Computer exercises			
Tests (4x)			