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| COURSE TITLE: | SCADA & HMI – Supervisory Control and Data Acquisition & Human-Machine Interface |
| Institute/Division: | Department of Automation and Computer Engineering Faculty of Electrical and Computer Engineering |
| Course code: | E-SH |
| Erasmus subject code: | 0714 |
| Number of contact hours | 45 |
| Course duration: | 1 semester (Fall/Winter) |
| ECTS credits: | 6 |
| Course description: | <p>The course comprises lectures and laboratory exercises. It is designed to provide the student with understanding of human machine interface and of supervisory control and data acquisition.</p> <p>The topics of the lectures and labs include: Introduction to supervisory control and data acquisition, distributed control systems, communication between field devices, human-machine interface, programmable logic controllers and programming language. Siemens controllers and HMI panels. Elements of ladder language and graphical elements, tags. TIA Portal environment. Control and monitoring operator panels design and implementations. Example of control and visualization applications, layers: hardware layer, visualization layer, error layer, logical layer, screens, alarms and users.</p> |
| Course type: | Lectures (15h), Laboratory (30h) |
| Literature: | Thomas, Mini S; McDonald, John Douglas: Power system SCADA and smart grids Rajesh Mehra, Vikrant Vij: PLCs & SCADA - Theory and Practice Dey, Chanchal; Sen, Sunit Kuma: Industrial automation technologies |
| Assessment method: | Laboratory exercises and written exam |
| Target group: | Students in Computer Science, Control and Electrical Eng. |
| Contact Person: | Krzysztof Schiff, Ph.D Eng., krzysztof.schiff@pk.edu.pl |