

Course title:		Industrial electronics		
Course code	Course status	Semester	Number of ECTS credits	Lecture hours
PA1203	Mandatory	II	5	2L+2E

Study program: Graduate academic studies, ELECTRICAL ENGINEERING, study program: Electronics, Telecommunications and Computer engineering (studies last for 4 semesters, 120 ECTS credits).	
Prerequisites: No prerequisites required.	
Course aims: <i>Introduction in industrial electronics with special attention to practica purposes –project in industrial surrounding</i>	
Teacher(s) first and last names: <i>R. Stojanović, Doc. dr</i>	
Studying method: Lectures, exercises, laboratory exercises, individual work on practical tasks, project, main project, consultations.	
Course synopsis:	
Preliminary week	Preparation and semester enrolment.
I week	Introduction: course description, teaching methodology
II week	Input elements (sensors, converters and transmitters)
III week	Output elements (amplifiers, ventilis, relays, varying-frequency drivers, step motors, servomotors)
IV week	Industrial supply sources, invertors, converters)
V week	Control of industrial motors.
VI week	Robots and motion controlers
VII week	Free week
VIII week	Fotoelectronics, lasers, fiber optics.
IX week	Communication of data and industrial network.
X week	Programabile controlers.
XI week	Integration of new technologies in industrial electronics
XII week	Visit to the industry
XIII week	Visit to the industry
XIV week	Project
XV week	Discussion and consultations
XVI week	<i>Final exam</i>
Final week	Administrative procedures.
XVIII-XXI week	Additional lessons, correction of the final exam and administrative procedures.
OPTEREĆENJE STUDENATA	
<p style="text-align: center;"><u>per week</u></p> <p>5 credits x 40/30 = 6 h i 40 min</p> <p>Working hours structure:</p> <p>2 h for lectures</p> <p>2 h for laboratory exercises</p> <p>2 h for individual work including consultations</p>	<p style="text-align: center;"><u>per semester</u></p> <p>Teaching and the final exam: (6 h 40 min) x 16 = 106 h 40 min</p> <p>Necessary preparation (before semester): 2 x (6 h and 40 min) = 13 h and 20 min</p> <p>Total work hours for the course: 5x30 = 150 h</p> <p>Additional hours for preparing correction of the final exam, including the exam taking: up to 30hours.</p> <p>Working hours structure:</p> <p>106 h and 40 min. (lectures)+13 h and 20 min. (Preparation)+30 h (additional work)</p>
Lessons attendance is mandatory for students, as well as doing laboratory exercises and colloquiums, etc.	
Literature: [1] T. E. Kissell, <i>Industrial Electronics, Third edition, Prentice Hall, 2003</i> [2] S. A. Karr, T. E. Kissell, R. C. Overstreet. T.W. Wylie, <i>Laboratory Manual to accompany Industrial Electronics, Third edition, Prentice Hall, 2003</i>	
The forms of knowledge testing and grading	
<ul style="list-style-type: none"> - Attendance to the lectures and activities (5%). - Laboratory exercises (10 %) - 2 colloquiums – 20 point each (40 point in total) - Project (45 %). <p>Student gets the passing grade by collecting 50 points at least.</p>	
Special remarks for the course :	
Teacher(s) who provided the information: <i>R. Stojanović, Doc. dr</i>	
Note: www. apeg.cg.yu	