| | | | UNIVERSITY OF EAST SARAJEVO Faculty of Mechanical Engineering | | | | | | | | |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------|---------------------------------------|------------------------------------|-----------------------|------------------------------------------------|-----------------|--|--|
| | | | St | udy prog | EMME | | | | | | |
| | | 1 ^{S2} | 1 ST LEVEL OF STUDIES 4 th YEAR | | | | | | | | |
| Course title | | Production systems automation | | | | | | | | | |
| Department | | Dep | artment | of produ | ction engineerin | ng | | | | | |
| Code | | | Co | | ourse status | Semes | Semester | | ECTS | | |
| МАФ-1-1-МС-06-1-04 | | 45-8-5- | 5-8-5-3-1-1 | | Aandatory | VIII | VIII | | 5 | | |
| Professor | PhD Sa | hD Saša Prodanović, assistant professor | | | | | | | | | |
| Teaching assis | stant | MSc La | ana Šiku | ıljak, sen | ior assistant | | | | | | |
| Numbe | urs (pei | rs (per week) | | Individual student workload (in semester) | | (in hours i | in (stud | Coefficient of student workload S ₀ | | | |
| L | I | E | I | Æ | L | Ε | LE | | So | | |
| 3 | 1 | l | | 1 | 2*15*S _o | 2*15*So | 0*15*S | | 1.4 | | |
| Total | total tea | http://www. | ours in | semester | | I otal student's | workload (| in hours in | semester) | | |
| 3* | 13 + 1*] | 13 + 1*1 | 3 = 75 | nours | ula o de 75 - 105 | $5*15*S_0 + 1*$ | $15^{5}S_{0} + 1^{3}$ | $15^{*}S_{0} = 1$ | US hours | | |
| | | 1 400 | 1 otal CO | hew know | $\frac{1}{1000}$ vledge from dec | p = 100 nours in igning and introd | semester | ern produ | tion automation | | |
| Student learnin objectives | Acquiring new knowledge from designing and introducing modern production automation. Mastering the skills to solve practical problems of automation with the application of computer, control, production and other technologies and appropriate scientific methods. | | | | | | | | | | |
| Conditionali | ity | No conditioning | | | | | | | | | |
| Teaching methods | | Lectures, auditory and laboratory exercises (homework), consultations | | | | | | | | | |
| Content of the course by weeks | | The role of automation in production. Goals, strategy, factors and types of automation. Automation facilities in production engineering. Fixed, programmable, flexible automation. Logical functions, theorems and normal forms. Switching algebra. Information, control and power part of the system. Sensors. Actuators. Combinational and sequential circuits. Definitions, models, analysis and synthesis. Pneumatic and electro-pneumatic realization of control systems. Hydraulic and electro-hydraulic realization of control systems. Programmable controllers. Functions, hardware, software, input-output modules. CNC, robot and cell controllers. Distributed control. Examples of production automation. | | | | | | | | | |
| Ant | hore | | | Name o | Required lite | rature n nublisher | Veg | r | Радос | | |
| С. Зарић | | | Avtor | латизани | и производње, Машински град, | | 1 ea | | I ugeo | | |
| | | | факул | тет, Бео | | | 199 | 0 | | | |
| | | | Additional literature | | | | | | | | |
| Aut | hors | | | Name o | the publication, publisher | | Yea | ır | Pages | | |
| M. P. Groover | • | | Auton Integr | nation, Pated Mar | roduction System nufacturing, Pren | ns, and Compute ntice Hall | er- 200 | 0 | | | |
| Obligations, forms of knowledge check and assessment | | Врста евалуације рада студента | | | | | | Бодови | Проценат | | |
| | | Pre-exam obligations | | | | | | | | | |
| | | Attendance at lectures / exercises | | | | | | 10 | 10% | | |
| | | Laboratory exercises (homework) | | | | | | 20 | 20% | | |
| | | Colloquium I | | | | | | 20 | 20% | | |
| | | Colloquium II | | | | | | 20 | 20% | | |

| | Final exam | 30 | 30% |
|-----------------------|------------|-----|-------|
| | Total | 100 | 100 % |
| Web page | | | |
| Date of certification | | | |