

**PM 24 Mandatory (normative) components of EP 24**

| <b>Discipline</b>                                       | <b>Fundamentals of hydraulic automation</b>   |
|---|---|
| Course  | 4, fall semester  |
| Amount  | 3 ECTS credits (90 hours)   |
| Language of teaching                                    | Ukrainian   |
| Department  | Fluid mechanics and mechatronics  |
| Teachers  | Oleksandr Luhovskyi   |
| Requirements for starting studies                       | Successful mastering of the knowledge and skills acquired during the study of the disciplines: «Mechanics of liquids and gas», «Theory of machines and mechanisms», «Discrete control systems for actuators», «Metrology, standardization and certification», «Higher mathematics», «Fundamentals of construction and design» |
| What will be studied                                    | The element base and systems of hydraulic automation will be studied. The design, production and operation of elements and systems of hydraulic automation will be studied.   |
| Why is it interesting/should be studied?                | The fundamentals of hydraulic automation under consideration make it possible to increase the efficiency of many technological processes in mechanical engineering, the chemical industry, medicine and agriculture. In which the element base of the hydraulic drive is used in production.                                  |
| Why you can learn (learning outcomes)                   | You can learn to create hydraulic automation systems based on theory. Accordingly, it will be possible to calculate the element base of the hydro automatic system. Design various hydraulic components of an automated system.   |
| How to use acquired knowledge and skills (competencies) | The acquired knowledge and skills will allow the student to create modern mechatronic systems for automation in the future. It is possible to provide solutions for increasing the efficiency of many technological processes in mechanical engineering, chemical industry, medicine and agriculture.                         |
| Lesson (study)  | Lectures  |
| Information support                                     | Study and work programs of the discipline, RS (rating system), lecture notes (electronic edition), study guide (electronic edition)   |
| Individual semester assignments                         | Not foreseen by the curriculum  |
| Current control   | Modular control work / express control, etc   |
| Semester control  | Examination   |