



**ROMÂNIA**  
**MINISTERUL EDUCAȚIEI ȘI CERCETĂRII**  
**UNIVERSITATEA DIN CRAIOVA**  
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| <b>NUMELE DISCIPLINEI: BAZELE COMENZILOR HIDRAULICE SI PNEUMATICE DE BORD I</b>                                                                                                                                                                                                                                                                              | <b>COURSE NAME: BASICS OF HYDRAULIC AND PNEUMATIC COMMANDS ON BOARD I</b>                                                                                                                                                                                                                                                                           |
| <b>DATE GENERALE</b>                                                                                                                                                                                                                                                                                                                                         | <b>GENERAL INFORMATION</b>                                                                                                                                                                                                                                                                                                                          |
| <b>Program de studii: ECHIPAMENTE SI INSTALATII DE AVIATIE</b><br><b>Anul: III</b><br><b>Semestrul: I</b><br><b>Credite ECTS: 5</b><br><b>Tipuri de activități: Curs, Laborator</b><br><b>Tip evaluare: Examen</b><br><b>Titular: Conf.dr.ing. Liviu Dincă</b>                                                                                               | <b>Study Program: AVIATION EQUIPMENTS AND INSTALLATIONS</b><br><b>Year: III</b><br><b>Semester: I</b><br><b>ECTS Credits: 5</b><br><b>Types of activities: Lecture, Laboratory</b><br><b>Assessment: Exam</b><br><b>Lecturer: Conf.dr.ing. Liviu Dincă</b>                                                                                          |
| <b>SCOPUL DISCIPLINEI</b>                                                                                                                                                                                                                                                                                                                                    | <b>COURSE PURPOSE</b>                                                                                                                                                                                                                                                                                                                               |
| Studentul trebuie sa isi insuseasca principalele aspecte teoretice si practice legate de arhitectura, caracteristicile si modul de functionare a instalatiilor hidraulice si pneumatice de aviatie                                                                                                                                                           | The student has to know the main theoretical and practical aspects related to the architecture, characteristics, and operation of hydro-pneumatic aviation installations                                                                                                                                                                            |
| <b>CERINȚE PREALABILE</b>                                                                                                                                                                                                                                                                                                                                    | <b>PREREQUISITES</b>                                                                                                                                                                                                                                                                                                                                |
| Analiză matematică, Matematici speciale, Fizica, Mecanica, Mecanica fluidelor,                                                                                                                                                                                                                                                                               | Mathematical analysis, Special Mathematics, Physics, Mechanics, Fluid Mechanics,                                                                                                                                                                                                                                                                    |
| <b>OBIECTIVE</b>                                                                                                                                                                                                                                                                                                                                             | <b>OBJECTIVES</b>                                                                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"><li>• Obiectiv 1: Cunoșterea arhitecturii sistemelor hidro-pneumatice de bord</li><li>• Obiectiv 2: Cunoașterea modului de functionare a sistemelor hidraulice de bord</li><li>• Obiectiv 3: Dobândirea de abilitati de a rezolva probleme practice de complexitate medie legate de sistemele hidraulice de bord</li></ul> | <ul style="list-style-type: none"><li>• Objective 1: Knowledge of the on board hydro-pneumatic systems architecture</li><li>• Objective 2: Knowledge of the on board hydro-pneumatic systems functioning</li><li>• Objective 3: Acquiring skills to solve practical applications with medium complexity in the aircraft hydraulic systems</li></ul> |
| <b>CONȚINUT CURS</b>                                                                                                                                                                                                                                                                                                                                         | <b>LECTURE CONTENT</b>                                                                                                                                                                                                                                                                                                                              |
| 1. Avantaje si dezavantaje ale sistemelor hidraulice si pneumatice de bord<br>2. Masini hidraulice de bord<br>3. Dispozitive de distributie si siguranta<br>4. Hidroacumulatoare si rezervoare<br>5. Filtrarea lichidelor hidraulice                                                                                                                         | 1. Advantages and drawbacks of the aircraft hydraulic and pneumatic systems<br>2. On board hydraulic machines<br>3. Distribution and safety devices<br>4. Hydro-accumulators and reservoirs<br>5. Filtration of the hydraulic liquids                                                                                                               |
| <b>METODE DE EVALUARE</b>                                                                                                                                                                                                                                                                                                                                    | <b>EVALUATION METHODS</b>                                                                                                                                                                                                                                                                                                                           |
| Examen                                                                                                                                                                                                                                                                                                                                                       | Exam                                                                                                                                                                                                                                                                                                                                                |
| <b>COMPETENȚE DOBÂNDITE</b>                                                                                                                                                                                                                                                                                                                                  | <b>ACQUIRED COMPETENCIES</b>                                                                                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"><li>• Studentul cunoaște structura si dispozitivele componente ale sistemelor hidraulice de bord</li><li>• Studentul are capacitatea de a utiliza practic dispozitivele hidraulice studiate</li><li>• Studentul poate evalua critic diferite situatii practice</li></ul>                                                   | <ul style="list-style-type: none"><li>• The student knows the structure and devices of the on board hydro-pneumatic systems</li><li>• The student has the skills use in practice the presented hydro-pneumatic devices</li><li>• The student has the competence to critically evaluate some practical situations</li></ul>                          |
| <b>Contact: ldinca@elth.ucv.ro</b>                                                                                                                                                                                                                                                                                                                           | <b>Contact: ldinca@elth.ucv.ro</b>                                                                                                                                                                                                                                                                                                                  |
| <b>Ultima actualizare: 1.10.2025</b>                                                                                                                                                                                                                                                                                                                         | <b>Last update: 1.10.2025</b>                                                                                                                                                                                                                                                                                                                       |