

## CURRICULUM

### YEAR 1

### Academic Year 2025/2026

| No.                                                                                                                                                                   | Course name | Course code                                                                                   | Course category | 1st Semester         |    |   |   |   |                                |       | 2nd Semester |                      |    |   |   |    |                                |       |                 |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------|-----------------|----------------------|----|---|---|---|--------------------------------|-------|--------------|----------------------|----|---|---|----|--------------------------------|-------|-----------------|----|
|                                                                                                                                                                       |             |                                                                                               |                 | Assisted activities* |    |   |   |   | Non-assisted activities (SI)** | Eval. | K            | Assisted activities* |    |   |   |    | Non-assisted activities (SI)** | Eval. | K               |    |
|                                                                                                                                                                       |             |                                                                                               |                 | No. of hours / week  |    |   |   |   |                                |       |              | No. of hours / week  |    |   |   |    |                                |       |                 |    |
| C                                                                                                                                                                     | S           | L                                                                                             | P               | PA                   | C  | S | L | P | PA                             |       |              |                      |    |   |   |    |                                |       |                 |    |
| DI                                                                                                                                                                    | 1           | Simularea producției/<br>Manufacturing Simulation Software                                    | FAI-IA-101      | DA                   | 1  |   | 2 |   |                                | 83    | E            | 5                    |    |   |   |    |                                |       |                 |    |
|                                                                                                                                                                       | 2           | Cercetare experimentală asistată/<br>Computer Aided Experimental Research                     | FAI-IA-102      | DS                   | 1  |   | 3 |   |                                | 69    | E            | 5                    |    |   |   |    |                                |       |                 |    |
|                                                                                                                                                                       | 3           | Aplicații tehnologice ale fizicii/<br>Technological Applications of Physics                   | FAI-IA-103      | DA                   | 1  |   | 1 |   |                                | 97    | E            | 5                    |    |   |   |    |                                |       |                 |    |
|                                                                                                                                                                       | 4           | Etică și integritate academică/<br>Ethics and Academic Integrity                              | FAI-IA-104      | DC                   | 1  | 1 |   |   |                                | 72    | E            | 4                    |    |   |   |    |                                |       |                 |    |
|                                                                                                                                                                       | 5           | Laborator de proiectare-cercetare 1/<br>Design&Research Laboratory 1                          | FAI-IA-105      | DS                   |    |   |   |   | 12                             | 0     | VP           | 7                    |    |   |   |    |                                |       |                 |    |
|                                                                                                                                                                       | 6           | Sisteme de control și instrumentație virtuală/<br>Control Systems and Virtual Instrumentation | FAI-IA-106      | DS                   |    |   |   |   |                                |       |              |                      | 1  |   | 2 |    | 58                             | E     | 4               |    |
|                                                                                                                                                                       | 7           | Proiectare tehnologică avansată/ Advanced<br>Computer Aided Technological Design              | FAI-IA-107      | DA                   |    |   |   |   |                                |       |              |                      | 1  |   | 1 |    | 72                             | E     | 4               |    |
|                                                                                                                                                                       | 8           | Teoria avansată a sudurii /<br>Advanced Welding Theory                                        | FAI-IA-108      | DS                   |    |   |   |   |                                |       |              |                      | 2  |   | 1 |    | 58                             | E     | 4               |    |
|                                                                                                                                                                       | 9           | Procese neconvenționale de fabricație/<br>Non-Traditional Manufacturing Processes             | FAI-IA-109      | DA                   |    |   |   |   |                                |       |              |                      | 2  |   | 1 |    | 58                             | VP    | 4               |    |
|                                                                                                                                                                       | 10          | Dezvoltarea durabilă a produselor/<br>Sustainable Product Development                         | FAI-IA-110      | DS                   |    |   |   |   |                                |       |              |                      | 1  |   |   | 1  | 72                             | VP    | 4               |    |
|                                                                                                                                                                       | 11          | Sisteme hidraulice și pneumatice/<br>Fluid Power Systems                                      | FAI-IA-111      | DC                   |    |   |   |   |                                |       |              |                      | 2  |   | 1 |    | 33                             | C     | 3               |    |
|                                                                                                                                                                       | 12          | Laborator de proiectare-cercetare 2/<br>Design&Research Laboratory 2                          | FAI-IA-112      | DS                   |    |   |   |   |                                |       |              |                      |    |   |   | 10 | 35                             | VP    | 7               |    |
| DO                                                                                                                                                                    | 13          | Prelucrarea statistică a datelor/<br>Statistical Data Processing                              | FAI-IA-113      | DA                   | 2  |   |   | 1 |                                | 58    | E            | 4                    |    |   |   |    |                                |       |                 |    |
|                                                                                                                                                                       |             | Managementul riscului în fabricație/<br>Risk Management in Manufacturing                      | FAI-IA-114      | DA                   |    |   |   |   |                                |       |              |                      |    |   |   |    |                                |       |                 |    |
| DL                                                                                                                                                                    | 14          | Abilități antreprenoriale*/<br>Entrepreneurial Skills*                                        | FAI-IA-115      | DC                   | 1  |   | 1 |   |                                | 47    | C            | 3                    |    |   |   |    |                                |       |                 |    |
|                                                                                                                                                                       | 15          | Abilități profesionale de comunicare*/<br>Professional Communication Skills*                  | FAI-IA-116      | DC                   |    |   |   |   |                                |       |              |                      | 1  |   |   | 1  | 47                             | C     | 3               |    |
| Number of hours per week for assisted activities, number and type of assessment activities and credit points per semester, and total hours of non-assisted activities |             |                                                                                               |                 |                      | 6  | 1 | 6 | 1 | 12                             | 379   | 4E<br>1VP    | 30                   | 9  | 0 | 6 | 1  | 10                             | 386   | 3E<br>1C<br>3VP | 30 |
|                                                                                                                                                                       |             |                                                                                               |                 |                      | 14 |   |   |   | 12                             |       |              |                      | 16 |   |   |    | 10                             |       |                 |    |
|                                                                                                                                                                       |             |                                                                                               |                 |                      | 26 |   |   |   |                                |       |              |                      | 26 |   |   |    |                                |       |                 |    |

### YEAR 2

### Academic Year 2026/2027

| No.                                                                                                                                                                         | Course name | Course code                                                                                                                  | Course category | 1st Semester         |        |   |   |    |                                |       |           | 2nd Semester         |    |   |   |    |                                |       |     |    |  |  |   |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------|--------|---|---|----|--------------------------------|-------|-----------|----------------------|----|---|---|----|--------------------------------|-------|-----|----|--|--|---|----|
|                                                                                                                                                                             |             |                                                                                                                              |                 | Assisted activities* |        |   |   |    | Non-assisted activities (SI)** | Eval. | K         | Assisted activities* |    |   |   |    | Non-assisted activities (SI)** | Eval. | K   |    |  |  |   |    |
|                                                                                                                                                                             |             |                                                                                                                              |                 | No. of hours / week  |        |   |   |    |                                |       |           | No. of hours / week  |    |   |   |    |                                |       |     |    |  |  |   |    |
|                                                                                                                                                                             |             |                                                                                                                              |                 | C                    | S      | L | P | PA |                                |       |           | C                    | S  | L | P | PA |                                |       |     |    |  |  |   |    |
| DI                                                                                                                                                                          | 1           | Procese avansate de automatizare a producției/<br>Advanced Manufacturing Automation Processes                                | FAI-IA-201      | DS                   | 2      |   | 1 |    |                                | 83    | VP        | 5                    |    |   |   |    |                                |       |     |    |  |  |   |    |
|                                                                                                                                                                             | 2           | Tehnologii avansate de fabricație a materialelor<br>compozite/ Advanced Manufacturing<br>Technologies of Composite Materials | FAI-IA-202      | DA                   | 2      |   | 1 | 1  |                                | 69    | E         | 5                    |    |   |   |    |                                |       |     |    |  |  |   |    |
|                                                                                                                                                                             | 3           | Tehnologii avansate de sudare/<br>Advanced Welding Technologies                                                              | FAI-IA-203      | DS                   | 1      |   | 1 |    |                                | 97    | E         | 5                    |    |   |   |    |                                |       |     |    |  |  |   |    |
|                                                                                                                                                                             | 4           | Inteligența artificială în producția industrială/<br>Artificial Intelligence in Manufacturing                                | FAI-IA-204      | DS                   | 1      |   | 2 |    |                                | 83    | E         | 5                    |    |   |   |    |                                |       |     |    |  |  |   |    |
|                                                                                                                                                                             | 5           | Laborator de proiectare-cercetare 3/<br>Design&Research Laboratory 3                                                         | FAI-IA-205      | DS                   |        |   |   |    | 12                             | 0     | VP        | 7                    |    |   |   |    |                                |       |     |    |  |  |   |    |
|                                                                                                                                                                             | 6           | Practică profesională/ Professional Training                                                                                 | FAI-IA-206      | DS                   |        |   |   |    |                                |       |           |                      |    |   |   | 10 | 110                            | VP    | 10  |    |  |  |   |    |
|                                                                                                                                                                             | 7           | Elaborarea disertației/<br>Preparing of Master's Thesis                                                                      | FAI-IA-207      | DS                   |        |   |   |    |                                |       |           |                      |    |   |   | 8  | 138                            | VP    | 10  |    |  |  |   |    |
|                                                                                                                                                                             | 8           | Practică pentru disertație/<br>Master's Thesis Training                                                                      | FAI-IA-208      | DS                   |        |   |   |    |                                |       |           |                      |    |   |   | 8  | 138                            | VP    | 10  |    |  |  |   |    |
| DO                                                                                                                                                                          | 9           | Planificarea resurselor întreprinderii/ Enterprise<br>Resource Planning                                                      | FAI-IA-209      | DA                   | 1      |   |   | 1  |                                | 47    | E         | 3                    |    |   |   |    |                                |       |     |    |  |  |   |    |
|                                                                                                                                                                             |             | Dezvoltare durabilă prin inovare tehnologică/<br>Sustainable Development by Technological<br>Innovation                      | FAI-IA-210      | DA                   |        |   |   |    |                                |       |           |                      |    |   |   |    |                                |       |     |    |  |  |   |    |
| Number of hours per week for assisted activities, number and type of<br>assessment activities and credit points per semester, and total hours of<br>non-assisted activities |             |                                                                                                                              |                 |                      | 7      | 0 | 5 | 2  | 12                             | 379   | 3E<br>2VP | 30                   | 0  | 0 | 0 | 0  | 26                             | 386   | 3VP | 30 |  |  |   |    |
|                                                                                                                                                                             |             |                                                                                                                              |                 |                      | 14     |   |   |    | 12                             |       |           |                      | 0  |   |   |    | 26                             |       |     |    |  |  |   |    |
|                                                                                                                                                                             |             |                                                                                                                              |                 |                      | 26     |   |   |    |                                |       |           |                      | 26 |   |   |    |                                |       |     |    |  |  |   |    |
| Dissertation Exam                                                                                                                                                           |             |                                                                                                                              |                 |                      | FAI-ED |   |   |    |                                |       |           |                      |    |   |   |    |                                |       |     |    |  |  | E | 10 |

\* Assisted activities are fully assisted (C,S,L,P) and partly assisted (PA) and are conducted over 14 weeks.

\*\* Non-assisted activities (SI) are calculated as total hours per academic year, by the credit points of the subjects (25 hours per credit point); the exam sessions are also included.

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