

# COURSE OUTLINE

## 1. Data about the study programme

|                                    |   |
|------------------------------------|---|
| 1.1 Higher education institution   | Transilvania University of Brasov                   |
| 1.2 Faculty                        | Technological Engineering and Industrial Management |
| 1.3 Department                     | Engineering and Industrial Management               |
| 1.4 Field of study <sup>1)</sup>   | Engineering and Management                          |
| 1.5 Study level <sup>2)</sup>      | Master  |
| 1.6 Study programme/ Qualification | Engineering and management in aviation / Master     |

## 2. Data about the course

|   |  |              |   |                     |   |                   |                               |     |
|---|--|--------------|---|---------------------|---|-------------------|-------------------------------|-----|
| 2.1 Name of course                        | Practical Activities for Research and Design 3 |              |   |                     |   |                   |                               |     |
| 2.2 Course convenor                       | -  |              |   |                     |   |                   |                               |     |
| 2.3 Seminar/ laboratory/ project convenor | Dissertation coordinator                       |              |   |                     |   |                   |                               |     |
| 2.4 Study year                            | 2  | 2.5 Semester | 4 | 2.6 Evaluation type | V | 2.7 Course status | Content <sup>3)</sup>         | SC  |
|   |  |              |   |                     |   |                   | Attendance type <sup>4)</sup> | CPC |

## 3. Total estimated time (hours of teaching activities per semester)

|   |     |                           |     |                                  |         |
|---|-----|---------------------------|-----|----------------------------------|---------|
| 3.1 Number of hours per week  | 12  | out of which: 3.2 lecture | 0   | 3.3 seminar/ laboratory/ project | 0/0/12  |
| 3.4 Total number of hours in the curriculum   | 168 | out of which: 3.5 lecture | 0   | 3.6 seminar/ laboratory/ project | 0/0/168 |
| Time allocation   |     |                           |     |                                  | hours   |
| Study of textbooks, course support, bibliography and notes                                  |     |                           |     |                                  | -       |
| Additional documentation in libraries, specialized electronic platforms, and field research |     |                           |     |                                  | 32      |
| Preparation of seminars/ laboratories/ projects, homework, papers, portfolios, and essays   |     |                           |     |                                  | 30      |
| Tutorial  |     |                           |     |                                  | 12      |
| Examinations  |     |                           |     |                                  | 8       |
| Other activities.....   |     |                           |     |                                  |         |
| 3.7 Total number of hours of student activity   |     |                           | 82  |                                  |         |
| 3.8 Total number per semester   |     |                           | 250 |                                  |         |
| 3.9 Number of credits <sup>5)</sup>   |     |                           | 10  |                                  |         |

## 4. Prerequisites (if applicable)

|                         |   |
|-------------------------|---|
| 4.1 curriculum-related  | • Not specified                                   |
| 4.2 competences-related | • Computer utilisation, internet searching skills |

## 5. Conditions (if applicable)

|  |  |
|--|--|
| 5.1 for course development                       | • -  |
| 5.2 for seminar/ laboratory/ project development | • Classroom equipped with a video projector, Internet access |

## 6. Specific competences and learning outcomes

|                          |   |
|--------------------------|---|
| Professional competences | <p><b>Cp.1 Applies advanced manufacturing systems</b></p> <p>L.O. 1.1 The graduate will be able to manage customer-focused organizational systems and develop effective strategies in order to achieve the company/organization's objectives.</p> <p>L.O.1.4. The graduate will be able to generate and analyze complex solutions to the problems faced by the organization.</p> <p><b>Cp.4. Adapts to changing situations</b></p> <p>L.O.4.3. The graduate will demonstrate in-depth knowledge and complex understanding of a particular field of scientific research and will use the results of research projects in order to improve the performance of the organization.</p> <p>L.O.4.4. The graduate will be able to provide and analyze scientific data from qualitative and quantitative research, in order to adapt the organization to the dynamics of the external environment.</p>  |
| Transversal competences  | <p><b>Ct.1 Finds solutions to problems</b></p> <p>L.O.1.1 The graduate will be able to responsibly perform professional tasks within a research project.</p> <p>L.O.1.3 The graduate will be able to identify creative solutions for mitigating conflicts that arise in the organizational and external environment in conditions of professional autonomy and independence, based on effective documentation, logical reasoning, evaluation and decision-making analysis.</p> <p><b>Ct.3. Negotiates with stakeholders</b></p> <p>L.O.3.2. The graduate will be able to build an effective relationship with business partners in order to establish a collaborative, sustainable cooperation.</p> <p>L.O.3.3. The graduate will be able to ensure a positive work climate at the workplace, favorable to stimulating the creativity of employees, so that they actively participate in achieving the organization's objectives.</p> |

## 7. Course objectives (resulting from the specific competences to be acquired)

|                              |   |
|------------------------------|---|
| 7.1 General course objective | <ul style="list-style-type: none"> <li>Developing the skills to carry out scientific research in the field of aviation</li> </ul>   |
| 7.2 Specific objectives      | <ul style="list-style-type: none"> <li>Use of research techniques</li> <li>Application of theoretical aspects studied within different disciplines to solve problems identified within an aviation organization</li> <li>Decision-making regarding the proposal of technical-economic and managerial solutions</li> <li>Evaluation, from a technical and economic point of view, of the proposed solutions</li> </ul> |

## 8. Content

|  |  |                 |         |
|--|--|-----------------|---------|
| 8.1 Course   | Teaching methods                                       | Number of hours | Remarks |
|  |  |                 |         |
| 8.2 Seminar/ laboratory/ project   | Teaching-learning methods                              | Number of hours | Remarks |
| The specific content of the project is established by the coordinator, depending on the topic of the dissertation. | Documentation / tutoring / individual study / research |                 |         |

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| <b>Bibliography</b><br>1. The collection of the Transylvania library in Braşov<br>2. Internet sources<br>3. The book fund of the department<br>4. Documentation available within the organization<br>5. Bibliography by the recommendation of the dissertation coordinator |
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**9. Correlation of course content with the demands of the labour market (epistemic communities, professional associations, potential employers in the field of study)**

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| The contents have been developed in accordance to the employers' requirements, so that the learning outcomes can be applied in the industrial environment and in research. |
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**10. Evaluation**

| Activity type   | 10.1 Evaluation criteria                              | 10.2 Evaluation methods | 10.3 Percentage of the final grade |
|---|---|-------------------------|------------------------------------|
| 10.4 Course   |   |                         |                                    |
| 10.5 Seminar/ laboratory/ project   | Ability to synthesize relevant scientific information | Project presentation    | 100%                               |
| 10.6 Minimal performance standard   |   |                         |                                    |
| <ul style="list-style-type: none"> <li>Compliance with the project deadline</li> <li>Relevance of the scientific research developed</li> <li>Synthesis capacity</li> <li>Proposal of concrete technical and managerial solutions</li> </ul> |   |                         |                                    |

This course outline was certified in the Department Board meeting on 17 / 09 / 2024 and approved in the Faculty Board meeting on 26 / 09 / 2024.

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| <b>Prof Eng, Tudor Ion DEACONESCU, PhD,</b> | <b>Associate Prof. Flavius Aurelian SÂRBU, PhD</b> |
| <b>Dean</b>                                 | <b>Head of Department</b>                          |
|   | <b>Dissertation coordinator</b>                    |
|   | <b>Holder of seminar/ laboratory/ project</b>      |

Note:

- 1) Field of study – select one of the following options: Bachelor / Master / Doctorat (to be filled in according to the forceful classification list for study programmes);
- 2) Study level – choose from among: Bachelor / Master / Doctorat;
- 3) Course status (content) – for the Bachelor level, select one of the following options: **FC** (fundamental course) / **DC** (course in the study domain)/ **SC** (speciality course)/ **CC** (complementary course); for the Master level, select one of the following options: **PC** (proficiency course)/ **SC** (synthesis course)/ **AC** (advanced course);
- 4) Course status (attendance type) – select one of the following options: **CPC** (compulsory course)/ **EC** (elective course)/ **NCPC** (non-compulsory course);
- 5) One credit is the equivalent of 25 study hours (teaching activities and individual study).