

# SYLLABUS <sup>1</sup>

**THIS COURSE UNIT IS TAUGHT IN ROMANIAN LANGUAGE**

## 1. Information about the program

1.1 Higher education institution	Politehnica University Timisoara
1.2 Faculty <sup>2</sup> / Department <sup>3</sup>	Mechanical Faculty/Dep.of Materials and Manufacturing Engineering
1.3 Chair	—
1.4 Field of study (name/code <sup>4</sup> )	Industrial Engineering/10
1.5 Study cycle	Master
1.6 Study program (name/code/qualification)	Inginerie Integrată /421

## 2. Information about discipline

2.1 Name of discipline/The educational classe <sup>5</sup>	Integrated management of technical projects						
2.2 Coordinator (holder) of course activities	Ș.L.dr.ing. Felicia BANCIU						
2.3 Coordinator (holder) of applied activities <sup>6</sup>	Ș.L.dr.ing. Felicia BANCIU						
2.4 Year of study <sup>7</sup>	2	2.5 Semester	3	2.6 Type of evaluation	E	2.7 Type of discipline <sup>8</sup>	DS

## 3. Total estimated time (direct activities (fully assisted), partially assisted activities and unassisted activities<sup>9</sup>)

3.1 Number of hours fully assisted/week	4 ,of which:	3.2 course	2	3.3 seminar/laboratory/project	0/0/2
3.1* Total number of hours fully assisted/sem.	56 ,of which:	3.2* course	28	3.3* seminar/laboratory/project	0/0/28
3.4 Number of hours partially assisted/week	,of which:	3.5 project, research		3.6 training	3.7 hours designing M.A. dizertation
3.4* Number of hours pasrtially assisted/ semester	,of which:	3.5* project of research		3.6* training	3.7* hours designing M.A. dizertation
3.8 Number of hours of unassisted activities/ week	3.25 ,of which:	Additional documentation in the library, on specialized electronic platforms, and on the field			1.2
		Study using a manual, course materials, bibliography and lecture notes			5
		Preparation of seminars/ laboratories, homework, assignments, portfolios, and essays			1
3.8* Total number of hours of unasssited asctivities/ semester	45 ,of which:	Additional documentation in the library, on specialized electronic platforms, and on the field			17
		Study using a manual, course materials, bibliography and lecture notes			14
		Preparation of seminars/ laboratories, homework, assignments, portfolios, and essays			14
3.9 Total hrs./week <sup>10</sup>	7.25				
3.9* Total hrs./semester	101				
3.10 No. of credits	8				

## 4. Prerequisites (where applicable)

4.1 Curriculum	• , Technology, Materials Science, Microeconomics, Mathematics
----------------	--

<sup>1</sup> The form corresponds to the Syllabus promoted by OMECTS 5703/18.12.2011 (Annex 3), updated based on the Specific Standards ARACIS of December 2016.

<sup>2</sup> The name of the faculty which manages the educational curriculum to which the discipline belongs

<sup>3</sup> The name of the department entrusted with the discipline, and to which the course coordinator/holder belongs.

<sup>4</sup> Fill in the code provided in HG no. 376/18.05.2016 or in HG similars annually updated.

<sup>5</sup> The educational classes of disciplines (ARACIS – specific standards, art./paragraph 4.1.2.a) are: fundamental disciplines, field disciplines, majoring/specialization disciplines.

<sup>6</sup> The applied activities refer to: seminar (S) / laboratory (L) / project (P) / practice/training (Pr).

<sup>7</sup> The year of study to which the discipline is provided in the curriculum .

<sup>8</sup> The types of disciplines (ARACIS – specific standards, art./paragraph 4.1.2.a) are: extended knowledge discipline / advanced knowledge discipline and synthetic discipline (DA / DCAV and DS) or art./paragraph 4.1.2 b) complementary discipline (DC)).

<sup>9</sup> Within UPT, the number of hours from 3.1\*, 3.2\*,...,3.9\* are obtained by multiplying by 14 (weeks) the number of hours from 3.1, 3.2,..., 3.9.

<sup>10</sup> The total number of hours/week is obtained by summing up the number of hours from 3.1, 3.4 și 3.8.

4.2 Competencies	• no
------------------	------

**5. Conditions** (where applicable)

5.1 of the course	• Classroom, laptop, projector, blackboard, internet connection
5.2 to conduct practical activities	• Classroom, laptop, projector, blackboard, internet connection

**6. Specific competencies** acquired through this discipline

Specific competencies	<ul style="list-style-type: none"> <li>• Practical skills for solving complex problems necessary to operate in various fields through the proper integration of technical, human, financial resources</li> <li>• Ability to organize, plan and lead the activity directly productive and related to the manufacture of products;</li> <li>• Integrated application of a wide range of principles and methods of design, maintenance, management and quality assurance in manufacturing systems</li> <li>• Development and management of professional and / or research projects</li> </ul>
Professional competencies ascribed to the specific competencies	<ul style="list-style-type: none"> <li>• C1. Solving complex tasks, specific to Industrial Engineering, using advanced knowledge in engineering sciences</li> <li>• C2. Realization of applications for modeling, simulation, analysis and optimization of materials, products and manufacturing processes</li> <li>• C5. Design and management of new or improved manufacturing systems</li> <li>• C6. The concept integrated in the product development process.</li> </ul>
Transversal competencies ascribed to the specific competencies	<ul style="list-style-type: none"> <li>• CT1. Execution of complex professional tasks in conditions of autonomy and professional independence</li> <li>• CT2 Assuming roles / functions of leading the activity of professional groups or institutions</li> <li>• CT3 Self-control of the learning process, diagnosis of training needs, reflective analysis of one's professional activity</li> </ul>

**7. Objectives of the discipline** (based on the grid of specific competencies acquired)

7.1 The general objective of the discipline	<ul style="list-style-type: none"> <li>• Mastering and using by students the specific concepts, methods, techniques and tools in the organization and management of manufacturing processes</li> <li>• Familiarizing students with the main currents and approaches in the field of technical project management</li> </ul>
7.2 Specific objectives	<ul style="list-style-type: none"> <li>• Familiarization with the terminology, methods and typical specific notions, aiming at the elements of industrial management</li> <li>• Learning methods of analysis and optimization of industrial manufacturing processes</li> <li>• Project evaluation by applying life cycle precepts</li> </ul>

**8. Content**

8.1 Course	Number of hours	Teaching methods
Introduction . Fundamentals The concept of industrial engineering and management	2	Interactive methods. Lecture (presentation) given by PPT presentations, discussions, explanations, examples, demonstrations, case studies use of material and examples appropriate to the topics presented
Need analysis	3	
Project organization	4	
Integrated management of technical projects	3	
Realization and follow-up of technical projects.	4	
Project procurement management	4	
Human resources management	2	
Document management t	2	
Risk management	2	

**Bibliography<sup>11</sup>**

1. Banciu Felicia – Notite de curs format tiparit si electronic Managementul integrat al proiectelor tehnice (2018)
- 2.M. Popa, D. Lungescu, I. Salanta (2013), Management Concepte, tehnici, abilitati, Ed. Presa Universitara Clujeana, ISBN 978-973-595-569-4
- 3.Liviu Marian, (), Managementul proiectelor
- 5.Ion Sorici, Adela Eliza Dumitrascu, Valentina Ciobanu, (2010), Managementul proiectelor si dezvoltarea durabila, ed. Universitatii Transilvania din Brasov.
- 6.Cibela Neagu, (2007), Managementul proiectelor, Ed. Tritonic, Bucuresti, ISBN 978-973-733-154-0
- 7.<http://www.pmi.org/>
8. *Field Guide to Project Management, Second Edition*. Edited by David I. Cleland, 2004 John Wiley & Sons, Inc.
- 9.Burton, C . A Practical Guide to Project Management, Kogan Page, London, 1997
- 10.Helms R. W. - Product Data Management as enabler for Concurrent Engineering, Eindhoven University of Technology, 2002
- 11.Initiation PLM. Travaux Dirigés, <http://cao.etudes.ecp.fr/index.php?page=td.htm>
- 12.AdaComputer, PLM <http://adacomputers.ro/ro/plm> , Proiect PLM Adaptor, 2010
13. Chase R., Jacobs R, Aquilano N. , Operations management for competitive advantage, Mc Graw Hill, 2006

<b>8.2 Applied activities<sup>12</sup></b>	<b>Number of hours</b>	<b>Teaching methods</b>
1. Analyzing the specifics of the project field. The notion of technical design. Examples. Duration of a project. Partners. Examples	2	Interactive methods. Discussions, explanations, examples, case studies. Thematic discussions focused on the materials available to students
Analysis of the external and internal environment. Examples	2	
Project justification / Analysis of the problem that the project wants to solve. The purpose and objectives of the project. Cause-effect diagram	4	
Project team - team component. How to organize it. The roles of the team members / specialized areas involved t	3	Interactive methods. Discussions, explanations, examples, case studies. Thematic discussions focused on the materials available to students
Project activities. Structural analysis.- Mind Manager; IgrafX	3	
Allocation of resources and costs related to activities. Gantt chart	4	Interactive methods. Discussions, explanations, examples, case studies. Thematic discussions focused on the materials available to students
Allocation of resources and costs related to activities. The critical path.MS Project	5	
Risk analysis. Their identification, probability of occurrence and impact. Risk management matrix	5	

<sup>11</sup> At least one title must belong to the department staff teaching the discipline, and at least one title must refer to a relevant work for the discipline, a national and international work that can be found in the UPT Library.

<sup>12</sup> The types of applied activities are those mentioned in 5. If the discipline contains more types of applied activities then they are marked, consecutively, in the table below. The type of activity will be marked distinctively under the form: „Seminar:”, „Laboratory:”, „Project:” and/or „Practice/Training:”.

**Bibliography<sup>13</sup>**

- 1.A. Curaj, M. Apetroae s. a (2003), Practica Managementului proiectelor, Editura Economica, ISBN 973-590-854-9
- 3.Virgil Popa, (2014), Managementul proiectului, standard si bune practici, Ed. Valahia University Press, ISBN 978-606-603-098-4
4. MindManager; FreeMind: tutorial (video, pdf); Edraw, iGrafx; GanttProject ;MS Project demo
5. <https://www.igrafx.com/use-cases/disciplines/process-modeling>
6. Free project management and task , <https://www.bitrix24.com>
7. <https://www.lucidchart.com/pages/pert-chart-critical-path-method>

**9. Coroboration of the content of the discipline with the expectations of the main representatives of the epistemic community, professional associations and employers in the field afferent to the program**

- Discipline contributes to the formation of knowledge necessary for future engineers managers in different industrial environments by developing the capacity and skills to implement technical project management methods, improving product quality taking into account both the entire product life cycle (from idea until elimination) as well as product development (product design) integrating various issues related to quality, deadlines, costs, user requirements.

**10. Evaluation**

Type of activity	10.1 Evaluation criteria <sup>14</sup>	10.2 Evaluation methods	10.3 Share of the final grade
10.4 Course	knowledge of notions and concepts associated with project management - knowledge of the specifics of project management in the industrial environment; -hearing course -skills for applying the methods presented in the course	Written exam, summative assessment, 3 subjects	66%
10.5 Applied activities	<b>S:</b>		
	<b>L:</b>		
	<b>P:</b> - understanding the notions presented in the course - the cognitive capacity regarding the analysis and synthesis of the concrete situations in which the notions of the discipline operate	Weekly verification of projects and progress from one week to another; - supporting the projects through a short oral presentation of 20 minutes (PowerPoint presentation or other utility) in which to demonstrate the understanding, utilities and application of models, methods and means presented in progress and discussed in the project meetings Presentation and debates on the given topics	34%
	<b>Pr:</b>		
	<b>Tc-R<sup>15</sup>:</b>		
<b>10.6 Minimum performance standard (minimum amount of knowledge necessary to pass the discipline and the way in which this knowledge is verified<sup>16</sup></b>			
<ul style="list-style-type: none"> <li>• understanding and explaining the minimum concepts of technical project management;</li> <li>• - understanding the ways of implementing the concepts presented in the course regarding the management of technical projects / industrial management</li> </ul>			

**Date of completion**

9.12.2020

**Course coordinator  
(signature)**

/

**Coordinator of applied activities  
(signature)****Head of Department  
(signature)****Date of approval in the Faculty  
Council <sup>17</sup>****Dean  
(signature)**<sup>13</sup> At least one title must belong to the staff teaching the discipline.<sup>14</sup> The Syllabus must contain the evaluation method of the discipline, specifying the criteria, the methods and the forms of evaluation, as well as mentioning the share attached to these within the final mark. The evaluation criteria must correspond to all activities stipulated in the curriculum (course, seminar, laboratory, project), as well as to the methods of continuous assessment (homework, essays etc.)<sup>15</sup> Tc-R= Homework-Reports<sup>16</sup> For this point turn to "Ghid de completare a Fișei disciplinei" found at: [http://univagora.ro/m/filer\\_public/2012/10/21/ghid\\_de\\_completare\\_fisa\\_disciplinei.pdf](http://univagora.ro/m/filer_public/2012/10/21/ghid_de_completare_fisa_disciplinei.pdf)<sup>17</sup> The approval is preceded by discussing the study program's board's point of view with regards to the syllabus.

