

# SYLLABUS <sup>1</sup>

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

## 1. Information about the program

1.1 Higher education institution	Politehnica University Timișoara
1.2 Faculty <sup>2</sup> / Department <sup>3</sup>	Mechanical /Material and Manufacturing Engineering
1.3 Chair	—
1.4 Field of study (name/code <sup>4</sup> )	Industrial Engineering/ 20.70.10 (HG185/2018 and HG158/2018)
1.5 Study cycle	Master
1.6 Study program (name/code/qualification)	Integrated Engineering

## 2. Information about discipline

2.1 Name of discipline/The educational classe <sup>5</sup>	Integrated product design						
2.2 Coordinator (holder) of course activities	Ștef Dorian						
2.3 Coordinator (holder) of applied activities <sup>6</sup>	Ștef Dorian						
2.4 Year of study <sup>7</sup>	1	2.5 Semester	1	2.6 Type of evaluation	E	2.7 Type of discipline <sup>8</sup>	DCAV

## 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	2	
3.1* Total number of hours fully assisted/sem.	56 ,of which:	3.2* course	28	3.3* seminar/laboratory/project	28	
3.4 Number of hours partially assisted/week	2 ,of which:	3.5 project, research	1	3.6 training	1	3.7 hours designing M.A. dizertation
3.4* Number of hours pasrtially assisted/ semester	28 ,of which:	3.5* project of research	14	3.6* training	14	3.7* hours designing M.A. dizertation
3.8 Number of hours of unassisted activities/ week	2 ,of which:	Additional documentation in the library, on specialized electronic platforms, and on the field				0.5
		Study using a manual, course materials, bibliography and lecture notes				0.5
		Preparation of seminars/ laboratories, homework, assignments, portfolios, and essays				1
3.8* Total number of hours of unasssited asctivities/ semester	28 ,of which:	Additional documentation in the library, on specialized electronic platforms, and on the field				7
		Study using a manual, course materials, bibliography and lecture notes				7
		Preparation of seminars/ laboratories, homework, assignments, portfolios, and essays				14
3.9 Total hrs./week <sup>10</sup>	8					
3.9* Total hrs./semester	112					
3.10 No. of credits	9					

## 4. Prerequisites (where applicable)

4.1 Curriculum	•
4.2 Competencies	•

## 5. Conditions (where applicable)

<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.



### Bibliography<sup>11</sup>

Draghici, G – Ingineria integrata a produselor, Editura Eurobit, Timisoara, ISBN 973-96065-7-1  
 Usher, J.M., Roy, U., Parsaei, H. (2005), Integrated Product and Process Development: Methods, Tools, and Technologies, John Wiley & Sons  
 Kuehn, W. (2006). Digitale Fabrik, Fabriksimulation fur Produktionsplaner. Hanser, Viena  
 Coze, Y. (2009). Virtual Concept > Real Profit with Digital Manufacturing and Simulation. Sogeti High Tech – Dassault Systems  
 Suh, N. P. (2001). Axiomatic Design-Advances and Applications. New York: Oxford University Press

8.2 Applied activities <sup>12</sup>	Number of hours	Teaching methods
Introduction	2	Lecture / questionnaire / debate / case study
Evaluating the communication style	2	
Assessing the role in the work team	2	
Elaboration of a product development project based on integrated engineering methods and models	22	

### Bibliography<sup>13</sup>

Draghici, G – Ingineria integrata a produselor, Editura Eurobit, Timisoara, ISBN 973-96065-7-1  
 Coze, Y. (2009). Virtual Concept > Real Profit with Digital Manufacturing and Simulation. Sogeti High Tech – Dassault Systems  
 Suh, N. P. (2001). Axiomatic Design-Advances and Applications. New York: Oxford University Press  
 Suh Nam Pyo (2006) - Axiomatic Design and Fabrication of Composite Structures: Applications in Robots, Machine Tools and Automobiles, Oxford series on advanced manufacturing ISBN 0-19-517877-7 Oxford University Press 2006

### 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

- In order to sketch the contents, choosing the teaching / learning methods, the head of the discipline organized a series of meetings with the business environment in the western part of the country, in the industrial field, as well as with other teachers who have concerns in the field. The meetings aimed at identifying the needs and expectations of employers in the field and coordinating with similar programs within other higher education institutions.

### 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	Acquiring theoretical knowledge about the content of the course	Written exam	60%
10.5 Applied activities	<b>S:</b>		
	<b>L:</b>		
	<b>P:</b> Project	Presentation / discussion/dabate	40%
	<b>Pr:</b>		
	<b>Tc-R<sup>15</sup>:</b>		

<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:”.

<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.)

**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>)

- Outline knowledge of life cycle approaches and methods and integrated product design
- Project development

**Date of completion**

**Course coordinator  
(signature)**

**Coordinator of applied activities  
(signature)**

**Head of Department  
(signature)**

**Date of approval in the Faculty  
Council <sup>17</sup>**

**Dean  
(signature)**

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<sup>15</sup> Tc-R= Homework-Reports

<sup>16</sup> For this point turn to "Ghid de completare a Fişei 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 redgards to the syllabus.