

## MSc “Platforms for Digitalized Value Networks” programme

### - Study plans –

This document presents the general syllabi of all the MSc double degrees available within the EIT Manufacturing “Platforms for Digitalized Value Networks” programme. Please note these are the basic versions of the study plans, in order to provide a better understanding of the programme and the differences among the several available combinations within the programme. Considering universities continuously develop their education offer, some of the courses could result to be updated, changed or replaced along the years. Once enrolled, the student will be supported by a local programme coordinator to define the final study plan accordingly to the general structure of the EIT Manufacturing Master programmes.

#### *General structure of the EIT Manufacturing Master Programmes*

Type of modules	Total credits for EIT-M Master	Total credits 1 <sup>st</sup> year	Total credits 2 <sup>nd</sup> year
<b>Technical courses (TC)</b>	45	40-50	10-20
<b>Specialization courses (SC)</b>	15		
<b>Innovation &amp; entrepreneurship courses (I&amp;E)</b>	30	10-20	10-20
<b>Master thesis (MT)</b>	30	0	30
<b>Tot</b>	120	60	60

Please scroll down this document to find the different syllabi of the following available combinations.

#### *Available entry and exit combinations from November 2022 on*

ENTRY university	EXIT university
SUPSI	Ecole Centrale de Nantes (ECN)
University College Dublin (UCD)	SUPSI
Ecole Centrale de Nantes (ECN)	SUPSI
University College Dublin (UCD)	Ecole Centrale de Nantes (ECN)
Politecnico di Milano (POLIMI)	SUPSI
Politecnico di Milano (POLIMI)	Ecole Centrale de Nantes (ECN)
University College Dublin (UCD)	Grenoble INP (GINP)
SUPSI	Grenoble INP (GINP)
Grenoble INP (GINP)	SUPSI
Politecnico di Milano (POLIMI)	Grenoble INP (GINP)

## Platforms for Digitalized Value Networks programme

- Study plan -

### SUPSI – ECN collaboration

#### General structure of the EIT-M Master Programme

Type of modules	Total credits for EIT-M Master	Total credits 1 <sup>st</sup> year	Total credits 2 <sup>nd</sup> year
Technical courses (TC)	45	40-50	10-20
Specialization courses (SC)	15		
Innovation & entrepreneurship courses (I&E)	30	10-20	10-20
Master thesis (MT)	30	0	30
Tot	120	60	60

Entry university SUPSI – exit university ECN

#### 1<sup>st</sup> year SUPSI

I&E: 20

TC: 40 (7 SC)

#### Draft plan:

Type of modules	SUPSI courses	ECTS	Semester	Total credits
TC	<a href="#">TSM FactPlan: Factory Planning</a>	3	1	33 (18 sem 1 15 sem 2)
	<a href="#">TSM BusAn: Business Analytics (ZH, Tue morning)</a>	3	1	
	<a href="#">TSM MarkFor: Market Analysis and Forecasting (ZH, Tue afternoon)</a>	3	1	
	<a href="#">FTP ModSim Modelling Simulation and Optimisation</a>	3	2	
	PSM Manufacturing Processes Courses*	9	1	
	<a href="#">TSM IndContr: Industrial control</a>	3	2	
	<a href="#">FTP AppStat Applied Statistics and Data Analysis</a>	3	2	
	<a href="#">FTP MultiASys: Multi-agent systems</a>	3	2	
	<a href="#">CM QRM: Quality and Risks management</a>	3	2	

SC	PSM Course Platforms for digitalized value networks*	7 (5+2)	1,2	7 (5 sem 1 2 sem 2)
I&E	<a href="#">CM InnChang: Innovation and Change Management (ZH, Wed evening)</a>	3	1	15 (6 sem 1 9 sem 2)
	<a href="#">CM InnoLEAN: Innovation and Lean</a>	3	1	
	PSM Project Work: Design and configuration of automated production systems using Virtual Environment**	9	2	

\*PMS module: this is an example of possible individual project to be included in this curriculum. Similar topics could be identified depending on the students' interest and opportunities in the university labs or companies collaborating with the university.

\*\* Lab offered in Lugano for a class of students with group assignments

I&E	Centrally organized summer school	5	2	5 (sem 2)
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## 2<sup>nd</sup> year ECN

Type of modules	ECN courses	ECTS	Semester	Total credits
TC	Multicriteria decision making and decision support	4	1	12
	Integrated design and implementation of CPPS	4	1	
	Integrated design engineering of PSS	4	1	
SC	Design of enterprise information systems	4	1	8
	Collaborative information systems in enterprise	4	1	
I&E	Enterprise of the Future	4	1	10
	R&D Project(2)	5		
	R&D Project(1)	1	1	
MT	Master thesis: focus on Platforms for digitalized value network	30	2	30
Other	Mandatory language course*	4	1	4

\*On top of the mandatory 120 ECTS

## Recap

Type of modules	ECTS in S1	ECTS in S2	ECTS in S3	ECTS in S4	Total credits
TC	18	15	12		<b>45</b>

SC	5	2	8		<b>15</b>
I&E	6	14	10		<b>30</b>
MT				30	<b>30</b>
Other			4		<b>4</b>
<b>TOT</b>	<b>29</b>	<b>31</b>	<b>34</b>	<b>30</b>	<b>124</b>

### Generic objectives of the program

Platforms for digitalized value Networks is a combination of studying manufacturing science including the usage and adoption of advanced digital solutions and platforms.

### Specificities of this combination

This study path enables students to gain deeper competencies in modeling and simulation approaches. They will also develop skills for enterprise management based on process performance assessment and information systems design and management for smart and connected enterprises.

## Platforms for Digitalized Value Networks programme

### - Study plan -

### UCD - SUPSI collaboration

#### General structure of the EIT-M Master Programme

Type of modules	Total credits for EIT-M Master	Total credits 1 <sup>st</sup> year	Total credits 2 <sup>nd</sup> year
Technical courses (TC)	45	40-50	10-20
Specialization courses (SC)	15		
Innovation & entrepreneurship courses (I&E)	30	10-20	10-20
Master thesis (MT)	30	0	30
<b>Tot</b>	<b>120</b>	<b>60</b>	<b>60</b>

#### Entry university UCD – exit university SUPSI

#### 1<sup>st</sup> year UCD

#### Draft plan:

Type of modules	UCD courses	ECTS	Semester	Total credits
TC	<a href="#">Systems Analysis &amp; Improvement</a>	5	1	30 (15 sem 1, 15 sem 2)
	<a href="#">Engineering Project Mgt</a>	5	1	
	<a href="#">Quant. Methods for Engineers</a>	5	1	
	Business Information Systems Management	7.5	2	
	Marketing Management	7.5	2	
SC	<a href="#">Supply Chain Design &amp; Analysis</a>	5	1	10 (5 sem1, 5 sem 2)
	Operations Management	5	2	
I&E	<a href="#">Technical Communication</a>	5	1	15 (10 sem 1, 5 sem 2)
	<a href="#">Design &amp; Innovation</a>	5	1	
	Professional Engineering (Management) (option)	5	2	
	Professional Engineering (Finance) (option)	5	2	
I&E	Centrally organized summer school	5	2	5 (sem 2)

## 2<sup>nd</sup> year SUPSI

Type of modules	SUPSI courses	ECTS	Semester	Total credits
TC	<a href="#">TSM FactPlan: Factory Planning</a>	3	1	15 (12 sem 1 3 sem 2)
	<a href="#">TSM BusAn: Business Analytics (ZH, Tue morning)</a>	3	1	
	<a href="#">TSM MarkFor: Market Analysis and Forecasting (ZH, Tue afternoon)</a>	3	1	
	<a href="#">FTP ModSim Modelling Simulation and Optimisation</a>	3	2	
	<a href="#">CM IntSust: Integrated Sustainable Management of Production Systems</a>	3	1	
SC	PSM Platforms for digitalized value networks: focus on platform environment	5	1	5 (5 sem 1 )
I&E	<a href="#">CM InnChang: Innovation and Change Management (ZH, Wed evening)</a>	3	1	10 (10 sem 1)
	<a href="#">CM InnoLEAN: Innovation and Lean</a>	3	1	
	PSM Platforms for digitalized value networks: focus on business models	4	1	
MT	Master thesis: focus on Platforms for digitalized value network	30	2	30

## Recap

Type of modules	ECTS in S1	ECTS in S2	ECTS in S3	ECTS in S4	Total credits
TC	15	15	12	3	<b>45</b>
SC	5	5	5		<b>15</b>
I&E	10	5+5	10		<b>30</b>
MT				30	<b>30</b>
<b>Tot</b>	<b>30</b>	<b>30</b>	<b>27</b>	<b>33</b>	<b>120</b>

## Platforms for Digitalized Value Networks programme

- Study plan -

### ECN – SUPSI collaboration

#### General structure of the EIT-M Master Programme

Type of modules	Total credits for EIT-M Master	Total credits 1 <sup>st</sup> year	Total credits 2 <sup>nd</sup> year
Technical courses (TC)	45	40-50	10-20
Specialization courses (SC)	15		
Innovation & entrepreneurship courses (I&E)	30	10-20	10-20
Master thesis (MT)	30	0	30
<b>Tot</b>	<b>120</b>	<b>60</b>	<b>60</b>

#### Entry university ECN – exit university SUPSI

#### 1<sup>st</sup> year ECN

I&E: 21

TC: 39 (6 SP)

#### Draft plan:

Type of modules	ECN courses	ECTS	Semester	Total credits
TC	Modelling of Complex Systems (I)	4	1	33 (20 sem 1, 13 sem 2)
	Introduction to Optimization Methods	5	1	
	Production Management	5	1	
	Discrete-event Simulation	4	1	
	Basics of Computer Science and Mathematics	2	1	
	Statistics and Data Analysis	5	2	
	Stochastic and Multi-Agent Simulation	4	2	
	Systems Engineering	4	2	
SC	Management Systems and Socio-Organizational Aspects for Ind. Eng. conference	4	2	6 (6 sem 2)
		2	2	
I&E	Innovation engineering	4	2	16
	Enterprise Modelling 1	4	1	



Other	Financial and Economic Aspects for Ind. Engineering	4	1	(8 sem 1, 8 sem 2)
	Enterprise Management*	4	2	
	Mandatory language course*	4	1	8
	Mandatory language course*	4	2	(4sem1, 4 sem2)

\* On top of the mandatory 120 ECTS of the programme

I&E	Centrally organized summer school	5	2	5 (sem 2)
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## 2<sup>nd</sup> year

I&E: 9

TC: 21 (9 SP)

MT: 30

Type of modules	SUPSI courses	ECTS	Semester	Total credits
TC	<a href="#">TSM FactPlan: Factory Planning</a>	3	1	12 (9 sem 1 3 sem 2)
	<a href="#">TSM BusAn: Business Analytics (ZH, Tue morning)</a>	3	1	
	<a href="#">TSM MarkFor: Market Analysis and Forecasting (ZH, Tue afternoon)</a>	3	1	
	<a href="#">TSM IndContr: Industrial control</a>	3	2	
SC	PSM Platforms for digitalized value networks*	9	1	9 (9 sem 1)
I&E	<a href="#">CM InnChang: Innovation and Change Management (ZH, Wed evening)</a>	3	1	9 (6 sem 1 3 sem 2)
	<a href="#">CM QRM: Quality and Risks management</a>	3	2	
	<a href="#">CM InnoLEAN: Innovation and Lean</a>	3	1	
MT	Master thesis: focus on Platforms for digitalized value network	30	1,2	30 (15 sem1, 15 sem2)

## Recap

Type of modules	ECTS in S1	ECTS in S2	ECTS in S3	ECTS in S4	Total credits
TC	20	13	9	3	<b>45</b>
SC	0	6	9	0	<b>15</b>
I&E	8	13	6	3	<b>30</b>





MT	0		0	30	<b>30</b>
Other	4	4			<b>8</b>
<b>Tot</b>	<b>32</b>	<b>36</b>	<b>24</b>	<b>36</b>	<b>128</b>

## Platforms for Digitalized Value Networks programme

- Study plan –

### POLIMI - SUPSI collaboration

#### General structure of the EITM Master Programme

Type of modules	Total credits for EIT-M Master	Total credits 1 <sup>st</sup> year	Total credits 2 <sup>nd</sup> year
Technical courses (TC)	45	40-50	10-20
Specialization courses (SC)	15		
Innovation & entrepreneurship courses (I&E)	30	10-20	10-20
Master thesis (MT)	30	0	30
<b>Tot</b>	<b>120</b>	<b>60</b>	<b>60</b>

Entry university POLIMI – exit university UCD

#### 1<sup>st</sup> year POLIMI

**Draft plan:**

Type of modules	POLIMI courses	ECTS	Semester	Total credits
TC	<a href="#">INDUSTRIAL TECHNOLOGIES</a>	10	1	30
	<a href="#">LOGISTICS MANAGEMENT</a>	10	2	
	<a href="#">OPERATIONS MANAGEMENT</a>	10	2	
SC	<a href="#">ACCOUNTING, FINANCE &amp; CONTROL</a>	10	1	10
I&E	<a href="#">LEADERSHIP &amp; INNOVATION</a>	10	2	20
	<a href="#">STRATEGY &amp; MARKETING</a>	10	1	

#### 2<sup>nd</sup> year SUPSI

Type of modules	SUPSI courses	ECTS	Semester	Total credits
TC	<a href="#">TSM FactPlan: Factory Planning</a>	3	1	15
	<a href="#">TSM BusAn: Business Analytics (ZH,Tue morning)</a>	3	1	(9 sem 1 6 sem 2)

	<a href="#">TSM MarkFor: Market Analysis and Forecasting (ZH, Tue afternoon)</a>	3	1	
	<a href="#">TSM IndContr: Industrial control</a>	3	2	
	<a href="#">CM QRM: Quality and Risks management</a>	3	2	
SC	PSM Platforms for digitalized value networks*	5	1	5 (5 sem 1 )
	<b>Centrally organized summer school</b>	5	1	5 (sem1)
I&E	<a href="#">CM InnChang: Innovation and Change Management (ZH, Wed evening)</a>	3	1	
	<a href="#">CM InnoLEAN: Innovation and Lean</a>	3	1	6 (6 sem 1)
MT	Master thesis: focus on Platforms for digitalized value network	30	2	30 (30 sem2)

### Recap

Type of modules	ECTS in S1	ECTS in S2	ECTS in S3	ECTS in S4	Total credits
TC	10	20	9	6	<b>45</b>
SC	10		5		<b>15</b>
I&E	10	10	11		<b>31</b>
MT				30	<b>30</b>
<b>Tot</b>	30	30	25	36	<b>121</b>

## Platforms for Digitalized Value Networks programme

- Study plan -

### UCD- ECN collaboration

*General structure of the EITM Master Programme*

Type of modules	Total credits for EIT-M Master	Total credits 1 <sup>st</sup> year	Total credits 2 <sup>nd</sup> year
Technical courses (TC)	45	40-50	10-20
Specialization courses (SC)	15		
Innovation & entrepreneurship courses (I&E)	30	10-20	10-20
Master thesis (MT)	30	0	30
<b>Tot</b>	<b>120</b>	<b>60</b>	<b>60</b>

*Entry university UCD – exit university ECN*

#### 1<sup>st</sup> year UCD

**Draft plan:**

Type of modules	ECN courses	ECTS	Semester	Total credits
TC	<a href="#">Systems Analysis &amp; Improvement</a> (core)	5	1	
	<a href="#">Engineering Project Mgt</a> (core)	5	1	
	<a href="#">Manufacturing Engineering I</a> (core)	5	1	
	Eng. DSS	5+2.5	2	
	Marketing Management	7.5	2	
	Operations Management	5	2	
SC	<a href="#">Supply Chain Design &amp; Analysis</a> (core)	5	1	
I&E	<a href="#">Design &amp; Innovation</a> (core)	5	1	
	<a href="#">Technical Communication</a> (core)	5	1	
	Professional Engineering (Management) (option)	5	2	
	Professional Engineering (Finance) (option)	5	2	

\*Alternatively “Innovation engineering” could be selected

I&E	Centrally organized summer school	5	2	5 (sem 2)
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## 2<sup>nd</sup> year ECN

Type of modules	ECN courses	ECTS	Semester	Total credits
TC	Integrated design engineering of PSS	5	1	10
	Integrated design and implementation of CPPS	5	1	
SC	Design of enterprise Information systems	5	1	10
	Collaborative information systems in enterprise	5		
I&E	Enterprise of the Future	5	1	10
	Project/Conference	5	1	
MT	Master thesis: focus on Platforms for digitalized value network (core)	30	2	30

### Recap

Type of modules	ECTS in S1	ECTS in S2	ECTS in S3	ECTS in S4	Total credits
TC	15	20	10		<b>45</b>
SC	5	0	10		<b>15</b>
I&E	10	5+5	10		<b>30</b>
MT	0	0		30	<b>30</b>
Other	0	0	4		<b>4</b>

### Generic objectives of the program

Platforms for digitalized value Networks is a combination of studying manufacturing science including the usage and adoption of advanced digital solutions and platforms.

### Specificities of this combination

This study path enables students to focus on operations management, through competencies of modeling and simulation approaches. They will also develop skills for enterprise management and project management in a digitalized context.

## Platforms for Digitalized Value Networks programme

- Study plan -

### Polimi – ECN collaboration

#### General structure of the EIT-M Master Programme

Type of modules	Total credits for EIT-M Master	Total credits 1 <sup>st</sup> year	Total credits 2 <sup>nd</sup> year
Technical courses (TC)	45	40-50	10-20
Specialization courses (SC)	15		
Innovation & entrepreneurship courses (I&E)	30	10-20	10-20
Master thesis (MT)	30	0	30
<b>Tot</b>	<b>120</b>	<b>60</b>	<b>60</b>

#### Entry university Polimi – exit university ECN

##### 1<sup>st</sup> year Polimi

I&E: 20

TC: 40 (10 SC)

Type of modules	POLIMI courses	ECTS	Semester	Total credits
TC	<a href="#">INDUSTRIAL TECHNOLOGIES</a>	10	1	30
	<a href="#">LOGISTICS MANAGEMENT</a>	10	2	
	<a href="#">OPERATIONS MANAGEMENT</a>	10	2	
SC	<a href="#">ACCOUNTING, FINANCE &amp; CONTROL</a>	10	1	10
I&E	<a href="#">LEADERSHIP &amp; INNOVATION</a>	10	2	20
	<a href="#">STRATEGY &amp; MARKETING</a>	10	1	

##### 2<sup>nd</sup> year ECN

I&E: 10

TC: 20

SC: 5 SC

MT: 30 ECTS

I&E	Centrally organized summer school	5	1	5 (sem 1)
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Type of modules	ECN courses	ECTS	Semester	Total credits
TC	Multicriteria decision making and decision support	5	1	15
	Integrated design engineering of PSS	5	1	
	Integrated design and implementation of CPPS	5	1	
SC	Design of enterprise information systems	5	1	5 (choice of 1 course)
	Integrated design engineering of PSS	5	1	
I&E	Enterprise of the Future	5	1	5
MT	Master thesis: focus on Platforms for digitalized value network	30	2	30
Other	Mandatory language course*	4	1	4

\* On top of mandatory 120 ECTS of the programme

### Recap

Type of modules	ECTS in S1	ECTS in S2	ECTS in S3	ECTS in S4	Total credits
TC	10	20	15		<b>45</b>
SC	10	0	5		<b>15</b>
I&E	10	10	10		<b>30</b>
MT				30	<b>30</b>
Other			4		<b>4</b>

### Generic objectives of the program

Platforms for digitalized value Networks is a combination of studying manufacturing science including the usage and adoption of advanced digital solutions and platforms.

### Specificities of this combination

This study path enables students to gain deeper competencies in industrial engineering and operation management in particular. They will also develop skills for enterprise management based on process performance assessment and information systems design and management for smart and connected enterprises.

# Platforms for Digitalized Value Networks programme

## - Study plan –

### UCD - GRENOBLE collaboration

#### General structure of the EITM Master Programme

Type of modules	Total credits for EIT-M Master	Total credits 1 <sup>st</sup> year	Total credits 2 <sup>nd</sup> year
Technical courses (TC)	45	40-50	10-20
Specialization courses (SC)	15		
Innovation & entrepreneurship courses (I&E)	30	10-20	10-20
Master thesis (MT)	30	0	30
<b>Tot</b>	<b>120</b>	<b>60</b>	<b>60</b>

#### Entry university UCD – exit university GRENOBLE

#### 1<sup>st</sup> year UCD

I&E: 25

TC: 40 (10SC)

Type of modules	UCD courses	ECTS	Semester	Total credits
TC	Systems Analysis & Improvement (core)	5	S1	30 (15 S1, 15 S2)
	Engineering Project Mgt (core)	5	S1	
	Quant. Methods for Engineers	5	S1	
	Business Information Systems Management	7.5	S2	
	Marketing Management	7.5	S2	
SC	Supply Chain Design & Analysis	5	S1	10 (5 S1, 5 S2)
	Operations Management	5	S2	
I&E	Design & Innovation	5	S1	20 (10 S1, 10 S2)
	Technical Communication	5	S1	
	Centrally organized summer school	5	S2	
	Professional Engineering (Management) (option)	5	S2	
	<u>OR</u> Professional Engineering (Finance) (option)	5	S2	

\*PMS module: this is an example of possible individual project to be included in this curriculum. Similar topics could be identified depending on the students' interest and opportunities in the university labs or companies collaborating with the university.

\*\* Lab offered in Lugano for a class of students with group assignments



**2<sup>nd</sup> year GRENOBLE**

I&amp;E: 10

TC: 20 (10SC)

MT: 30

Type of modules	GRENOBLE courses	Semes-ter	ECTS	Total credits
TC	Smart Analytics for Big Data - 5GUC3500	S3	5	10
	Virtual Reality for Industry 4.0 - 5GUC3319	S3	5	
SC	Multi-criteria Decision Aiding and Artificial Intelligence - 5GUC4202	S3	5	10
	Tactical and Operational Supply Chain Management - 5GUC2004	S3	5	
I&E	OPTION: Operational Excellence in R&D - 5GUC3700	S3	5	10
	OR iDesigner : Tackling Complexity by Integration - 5GUC0904			
	Research project	S3	5	
MT	Master thesis	S4	30	30
<b>TOTAL</b>			<b>60</b>	<b>60</b>

*Recap*

Type of modules	ECTS in S1	ECTS in S2	ECTS in S3	ECTS in S4	Total credits
TC	15	15	10	0	<b>40</b>
SC	5	5	10	0	<b>20</b>
I&E	10	10	10	0	<b>30</b>
MT	0	0	0	30	<b>30</b>
<b>Tot</b>	30	30	30	30	<b>120</b>

# Platforms for Digitalized Value Networks programme

- Study plan -

## SUPSI - GRENOBLE collaboration

### General structure of the EITM Master Programme

Type of modules	Total credits for EIT-M Master	Total credits 1 <sup>st</sup> year	Total credits 2 <sup>nd</sup> year
Technical courses (TC)	45	40-50	10-20
Specialization courses (SC)	15		
Innovation & entrepreneurship courses (I&E)	30	10-20	10-20
Master thesis (MT)	30	0	30
<b>Tot</b>	<b>120</b>	<b>60</b>	<b>60</b>

Entry university SUPSI – exit university GRENOBLE

### 1<sup>st</sup> year SUPSI

I&E: 20

TC: 40 (10 SC)

Type of modules	SUPSI courses	ECTS	Semester	Total credits
TC	<a href="#">TSM FactPlan: Factory Planning</a>	3	S1	30 (15 S1, 15 S2)
	<a href="#">TSM MarkFor: Market Analysis and Forecasting (ZH, Tue afternoon)</a>	3	S1	
	<a href="#">TSM IndContr: Industrial control</a>	3	S2	
	PSM Manufacturing Processes Courses*	9	S1	
	<a href="#">FTP AppStat Applied Statistics and Data Analysis</a>	3	S2	
	<a href="#">FTP ModSim Modelling Simulation and Optimisation</a>	3	S2	
	<a href="#">FTP MultiASys: Multi-agent systems</a>	3	S2	
	<a href="#">CM QRM: Quality and Risks management</a>	3	S2	
SC	PSM Course Platforms for digitalized value networks*	7 (5+2)	S1,2	10 (8 S1 2 S2)
	<a href="#">TSM BusAn: Business Analytics (ZH, Tue morning)</a>	3	S1	
I&E	<a href="#">CM InnChang: Innovation and Change Management (ZH, Wed evening)</a>	3	S1	20 (6 S1 14 S2)
	<a href="#">CM InnoLEAN: Innovation and Lean</a>	3	S1	

	PSM Project Work: Design and configuration of automated production systems using Virtual Environment**	9	S2	
	<b>Centrally organized summer school</b>	5	S2	

\*PMS module: this is an example of possible individual project to be included in this curriculum. Similar topics could be identified depending on the students' interest and opportunities in the university labs or companies collaborating with the university.

\*\* Lab offered in Lugano for a class of students with group assignments

## 2<sup>nd</sup> year GRENOBLE

I&E: 10

TC: 20 (5 SC)

MT: 30 ECTS

Type of modules	GRENOBLE courses	ECTS	Semester	Total credits
TC	Smart Analytics for Big Data - 5GUC3500	5	S3	10
	Virtual Reality for Industry 4.0 - 5GUC3319	5	S3	
SC	Multi-criteria Decision Aiding and Artificial Intelligence - 5GUC4202	5	S3	10
	Tactical and Operational Supply Chain Management - 5GUC2004	5	S3	
I&E	OPTION: Operational Excellence in R&D - 5GUC3700	5	S3	10
	OR iDesigner : Tackling Complexity by Integration - 5GUC0904			
	Research project	5	S3	
MT	Master thesis	30	S4	30
<b>TOTAL</b>		<b>60</b>		<b>60</b>

## Recap

Type of modules	ECTS in S1	ECTS in S2	ECTS in S3	ECTS in S4	Total credits
TC	15	15	10		<b>40</b>
SC	8	2	10		<b>20</b>
I&E	6	14	10		<b>30</b>
MT				30	<b>30</b>
<b>Tot</b>	29	31	30	30	<b>120</b>

## Platforms for Digitalized Value Networks programme

- Study plan –

### GRENOBLE - SUPSI collaboration

#### *General structure of the EITM Master Programme*

Type of modules	Total credits for EIT-M Master	Total credits 1 <sup>st</sup> year	Total credits 2 <sup>nd</sup> year
Technical courses (TC)	45	40-50	10-20
Specialization courses (SC)	15		
Innovation & entrepreneurship courses (I&E)	30	10-20	10-20
Master thesis (MT)	30	0	30
Tot	120	60	60

#### *Entry university Grenoble – exit university SUPSI*

#### **1<sup>st</sup> year Grenoble**

I&E: 21

TC: 39 (9 SC)

Type of modules	Grenoble courses	ECTS	Semester	Total credits
TC	Sustainability in Industrial Engineering - WGUS1074	3	S1	30 (21 S1, 9 S2)
	Basic Economics for Sustainable Industrial Engineering - WGUS1014	3	S1	
	Information Systems Management - WGUS2044	3	S1	
	Data analytics for industrial engineering - WGUS2092	3	S1	
	Quality and Process Development - WGUS2054	3	S1	
	Project on Computer Science - WGUS1028	3	S1	
	Inventive problem solving, bio inspired innovation - WGUS2071	3	S2	
	UE Sustainable work and organization - WGUS2082	3	S1	
	Production and Operations Management - WGUS1044	3	S2	
	Industrial Economics - WGMS7028	3	S2	
SC	Performance Evaluation of Production Systems - WGUS1065	3	S1	9

	Project on Data Analytics for Manufacturing - WGUS3022	3	S2	(3 S1, 6 S2)
	Research Project - 4GUC00E5	3	S2	
I&E	Intercultural communication S7	3	S1	21 (6 S1, 15 S2)
	Product Development Project 1 - 4GMP1611	3	S1	
	<b>Centrally organized summer school</b>	5	S2	
	Production and Operations Management	5	S2	
	Product Development Project 2 - 4GUP1901	5	S2	

## 2<sup>nd</sup> year SUPSI

I&E: 9

TC: 21 (6 SP)

MT: 30

Type of modules	SUPSI courses	ECTS	Semester	Total credits
TC	<a href="#">TSM FactPlan: Factory Planning</a>	3	S3	15 (9 S3 6 S4)
	<a href="#">TSM BusAn: Business Analytics (ZH, Tue morning)</a>	3	S3	
	<a href="#">TSM MarkFor: Market Analysis and Forecasting (ZH, Tue afternoon)</a>	3	S3	
	<a href="#">TSM IndContr: Industrial control</a>	3	S4	
	<a href="#">FTP ModSim Modelling Simulation and Optimisation</a>	3	S4	
SC	PSM Platforms for digitalized value networks*	6	S3	6 (6 S3)
I&E	<a href="#">CM InnChang: Innovation and Change Management (ZH, Wed evening)</a>	3	S3	9 (S3)
	<a href="#">CM IntSust: Integrated Sustainable Management of Production Systems</a>	3	S3	
	<a href="#">CM InnoLEAN: Innovation and Lean</a>	3	S3	
MT	Master thesis: focus on Platforms for digitalized value network	30	S4	30 (S4)

## Recap

Type of modules	ECTS in S1	ECTS in S2	ECTS in S3	ECTS in S4	Total credits
TC	21	9	9	6	<b>45</b>
SC	3	6	6	0	<b>15</b>
I&E	6	15	9	0	<b>30</b>
MT	0	0	0	30	<b>30</b>
<b>Tot</b>	<b>30</b>	<b>30</b>	<b>24</b>	<b>36</b>	<b>120</b>

## Platforms for Digitalized Value Networks programme

- Study plan –

### POLIMI-GRENOBLE collaboration

#### *General structure of the EITM Master Programme*

Type of modules	Total credits for EIT-M Master	Total credits 1 <sup>st</sup> year	Total credits 2 <sup>nd</sup> year
Technical courses (TC)	45	40-50	10-20
Specialization courses (SC)	15		
Innovation & entrepreneurship courses (I&E)	30	10-20	10-20
Master thesis (MT)	30	0	30
Tot	120	60	60

*Entry university Polimi – exit university Grenoble INP*

#### **1<sup>st</sup> year Polimi**

I&E: 20

TC: 40 (10 SC)

Type of modules	Polimi courses	ECTS	Semester	Total credits
TC	Industrial technologies	10	S1	30 (10 S1, 20 S2)
	Logistics management	10	S2	
	Operations management	10	S2	
SC	Accounting – Finance & Control	10	S1	10 (10 S1)
I&E	Leadership & Innovation	10	S2	20 (10 S1, 10 S2)
	Strategy & Marketing	10	S1	

**2<sup>nd</sup> year Grenoble**

I&amp;E: 10

TC: 20 (10 SC)

MT: 30

Type of modules	Grenoble courses	ECTS	Semester	Total credits
TC	Smart analytics for Big data – 5GUC3500	5	S3	10
	Virtual reality for Industry 4.0 - 5GUC3319	5	S3	(10 S3)
SC	Multi-criteria decision aiding and Artificial intelligence – 5GUC4202	5	S3	10
	Tactical and operational supply chain management - 5GUC2004	5	S3	(10 S3)
I&E	Option: operational excellence in R&D 5GUC33700	5	S3	10 (10 S3)
	OR IDesigner: tackling complexity by integration – 5GUC0904			
	<b>Centrally organized Summer School</b>	5	SUMMER	
MT	Master thesis: focus on Platforms for digitalized value network	30	S4	30 (S4)

*Recap*

Type of modules	ECTS in S1	ECTS in S2	ECTS in S3	ECTS in S4	Total credits
TC	10	20	10	0	<b>40</b>
SC	10	0	10	0	<b>20</b>
I&E	10	10	10	0	<b>30</b>
MT	0	0	0	30	<b>30</b>
<b>Tot</b>	30	30	30	30	<b>120</b>