

Platforms for Digitalized Value Network 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 st year	Total credits 2 nd 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 ECN – exit university SUPSI

1st 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	
SC	Systems Engineering	4	2	6 (6 sem 2)
	Management Systems and Socio-Organizational Aspects for Ind. Eng. conference	2	2	
I&E	Innovation engineering	4	2	16

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

I&E	Centrally organized summer school	5	2	5 (sem 2)
-----	-----------------------------------	---	---	--------------

2nd year

I&E: 9

TC: 21 (9 SP)

MT: 30

Type of modules	SUPSI courses	ECTS	Semester	Total credits
TC	TSM FactPlan: Factory Planning	3	1	12 (9 sem 1 3 sem 2)
	TSM BusAn: Business Analytics (ZH, Tue morning)	3	1	
	TSM MarkFor: Market Analysis and Forecasting (ZH, Tue afternoon)	3	1	
	TSM IndContr: Industrial control	3	2	
SC	PSM Platforms for digitalized value networks*	9	1	9 (9 sem 1)
I&E	CM InnChang: Innovation and Change Management (ZH, Wed evening)	3	1	9 (6 sem 1 3 sem 2)
	CM QRM: Quality and Risks management	3	2	
	CM InnoLEAN: Innovation and Lean	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	45
SC	0	6	9	0	15
I&E	8	13	6	3	30
MT	0		0	30	30
Other	4	4			8
Tot	32	36	24	36	128

Platforms for Digitalized Value Network 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 st year	Total credits 2 nd 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 ECN – exit university SUPSI

1st 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	
SC	Systems Engineering	4	2	6 (6 sem 2)
	Management Systems and Socio-Organizational Aspects for Ind. Eng. conference	2	2	
I&E	Innovation engineering	4	2	16

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

I&E	Centrally organized summer school	5	2	5 (sem 2)
-----	-----------------------------------	---	---	--------------

2nd year

I&E: 9

TC: 21 (9 SP)

MT: 30

Type of modules	SUPSI courses	ECTS	Semester	Total credits
TC	TSM FactPlan: Factory Planning	3	1	12 (9 sem 1 3 sem 2)
	TSM BusAn: Business Analytics (ZH, Tue morning)	3	1	
	TSM MarkFor: Market Analysis and Forecasting (ZH, Tue afternoon)	3	1	
	TSM IndContr: Industrial control	3	2	
SC	PSM Platforms for digitalized value networks*	9	1	9 (9 sem 1)
I&E	CM InnChang: Innovation and Change Management (ZH, Wed evening)	3	1	9 (6 sem 1 3 sem 2)
	CM QRM: Quality and Risks management	3	2	
	CM InnoLEAN: Innovation and Lean	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	45
SC	0	6	9	0	15
I&E	8	13	6	3	30
MT	0		0	30	30
Other	4	4			8
Tot	32	36	24	36	128

Platforms for Digitalized Value Network 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 st year	Total credits 2 nd 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 ECN – exit university SUPSI

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

I&E	Centrally organized summer school	5	2	5 (sem 2)
-----	-----------------------------------	---	---	--------------

2nd year

I&E: 9

TC: 21 (9 SP)

MT: 30

Type of modules	SUPSI courses	ECTS	Semester	Total credits
TC	TSM FactPlan: Factory Planning	3	1	12 (9 sem 1 3 sem 2)
	TSM BusAn: Business Analytics (ZH, Tue morning)	3	1	
	TSM MarkFor: Market Analysis and Forecasting (ZH, Tue afternoon)	3	1	
	TSM IndContr: Industrial control	3	2	
SC	PSM Platforms for digitalized value networks*	9	1	9 (9 sem 1)
I&E	CM InnChang: Innovation and Change Management (ZH, Wed evening)	3	1	9 (6 sem 1 3 sem 2)
	CM QRM: Quality and Risks management	3	2	
	CM InnoLEAN: Innovation and Lean	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	45
SC	0	6	9	0	15
I&E	8	13	6	3	30
MT	0		0	30	30
Other	4	4			8
Tot	32	36	24	36	128

Platforms for Digitalized Value Network programme UCD- ECN Study plan –

General structure of the EIT-M Master Programme

Type of modules	Total credits for EIT-M Master	Total credits 1 st year	Total credits 2 nd 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 UCD – exit university ECN

1st year UCD

I&E:

TC:

Draft plan:

Type of modules	UCD courses	ECTS	Semester	Total credits
TC	Systems Analysis & Improvement (core)	5	1	
	Engineering Project Mgt (core)	5	1	
	Manufacturing Engineering II (core)	5	1	
	Eng. Decision Support Systems	5	2	
	Eng. Decision Support Systems Projects	2.5	2	
	Marketing Management	7.5	2	
	Operations Management	5	2	
SC	Supply Chain Design & Analysis (core)	5	1	
I&E	Mechanical Engineering Design II (core)	5	1	
	Technical Communication (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)
-----	-----------------------------------	---	---	--------------

2nd year ECN

I&E:

TC:

MT:

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	M2_I-ENG_SCE_DEIS	5	1	10
	Collaborative information systems in enterprise	M2_I-ENG_SCE_CISE	5		
I&E	Enterprise of the Future		5	1	10
	Project/Conference or Summer School		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		45
SC	5	0	10		15
I&E	10	5+5	10		30
MT	0	0		30	30
Other	0	0	4		4

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 Network 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 st year	Total credits 2 nd 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 ECN

1st year Polimi

I&E: 20

TC: 40 (10 SC)

Type of modules	POLIMI courses	ECTS	Semester	Total credits
TC	INDUSTRIAL TECHNOLOGIES	10	1	30
	LOGISTICS MANAGEMENT	10	2	
	OPERATIONS MANAGEMENT	10	2	
SC	ACCOUNTING, FINANCE & CONTROL	10	1	10
I&E	LEADERSHIP & INNOVATION	10	2	20
	STRATEGY & MARKETING	10	1	

2nd year ECN

I&E: 10

TC: 20

SC: 5 SC

MT: 30 ECTS

I&E	Centrally organized summer school	5	1	5
-----	-----------------------------------	---	---	---

				(sem 1)
--	--	--	--	---------

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

Recap

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

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 Network 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 st year	Total credits 2 nd 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 ECN

1st year Polimi

I&E: 20

TC: 40 (10 SC)

Type of modules	POLIMI courses	ECTS	Semester	Total credits
TC	INDUSTRIAL TECHNOLOGIES	10	1	30
	LOGISTICS MANAGEMENT	10	2	
	OPERATIONS MANAGEMENT	10	2	
SC	ACCOUNTING, FINANCE & CONTROL	10	1	10
I&E	LEADERSHIP & INNOVATION	10	2	20
	STRATEGY & MARKETING	10	1	

2nd year ECN

I&E: 10

TC: 20

SC: 5 SC

MT: 30 ECTS

I&E	Centrally organized summer school	5	1	5 (sem 1)
-----	-----------------------------------	---	---	--------------

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

Recap

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

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 Network 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 st year	Total credits 2 nd 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 ECN

1st year Polimi

I&E: 20

TC: 40 (10 SC)

Type of modules	POLIMI courses	ECTS	Semester	Total credits
TC	INDUSTRIAL TECHNOLOGIES	10	1	30
	LOGISTICS MANAGEMENT	10	2	
	OPERATIONS MANAGEMENT	10	2	
SC	ACCOUNTING, FINANCE & CONTROL	10	1	10
I&E	LEADERSHIP & INNOVATION	10	2	20
	STRATEGY & MARKETING	10	1	

2nd year ECN

I&E: 10

TC: 20

SC: 5 SC

MT: 30 ECTS

I&E	Centrally organized summer school	5	1	5
-----	-----------------------------------	---	---	---

				(sem 1)
--	--	--	--	---------

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

Recap

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

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 Network 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 st year	Total credits 2 nd 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 ECN

1st year Polimi

I&E: 20

TC: 40 (10 SC)

Type of modules	POLIMI courses	ECTS	Semester	Total credits
TC	INDUSTRIAL TECHNOLOGIES	10	1	30
	LOGISTICS MANAGEMENT	10	2	
	OPERATIONS MANAGEMENT	10	2	
SC	ACCOUNTING, FINANCE & CONTROL	10	1	10

I&E	LEADERSHIP & INNOVATION	10	2	20
	STRATEGY & MARKETING	10	1	

2nd year ECN

I&E: 10

TC: 20

SC: 5 SC

MT: 30 ECTS

I&E	Centrally organized summer school	5	1	5 (sem 1)
-----	-----------------------------------	---	---	--------------

Type of modules	ECN courses	ECTS	Semes-ter	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

Recap

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

Other			4		4
-------	--	--	---	--	---

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 Network 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 st year	Total credits 2 nd 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 ECN

1st year Polimi

I&E: 20

TC: 40 (10 SC)

Type of modules	POLIMI courses	ECTS	Semester	Total credits
TC	INDUSTRIAL TECHNOLOGIES	10	1	30
	LOGISTICS MANAGEMENT	10	2	
	OPERATIONS MANAGEMENT	10	2	
SC	ACCOUNTING, FINANCE & CONTROL	10	1	10
I&E	LEADERSHIP & INNOVATION	10	2	20
	STRATEGY & MARKETING	10	1	

2nd year ECN

I&E: 10

TC: 20

SC: 5 SC

MT: 30 ECTS

I&E	Centrally organized summer school	5	1	5 (sem 1)
-----	-----------------------------------	---	---	--------------

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
-------	---------------------------	---	---	---

Recap

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

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 Network programme

- Study plan – Polimi – ECN collaboration

General structure of the EIT-M Master Programme



Co-funded by the European Union

Type of modules	Total credits for EIT-M Master	Total credits 1 st year	Total credits 2 nd 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 ECN

1st year Polimi

I&E: 20

TC: 40 (10 SC)

Type of modules	POLIMI courses	ECTS	Semester	Total credits
TC	INDUSTRIAL TECHNOLOGIES	10	1	30
	LOGISTICS MANAGEMENT	10	2	
	OPERATIONS MANAGEMENT	10	2	
SC	ACCOUNTING, FINANCE & CONTROL	10	1	10
I&E	LEADERSHIP & INNOVATION	10	2	20
	STRATEGY & MARKETING	10	1	

2nd year ECN

I&E: 10

TC: 20

SC: 5 SC

MT: 30 ECTS

I&E	Centrally organized summer school	5	1	5 (sem 1)
-----	-----------------------------------	---	---	--------------

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

Recap

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

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.