



Double Degree

Management Engineering and Product-Service System Design

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1. Professional profile

1.1 Why this program is relevant for society and business? The Scenario

In a world that is continuously changing, design and innovation are the main source of renewal and prosperity. They are necessary for society, to address the challenges of sustainability in a hyper connected and complex world; they are necessary for organizations and businesses, to create solutions that are valuable and to ensure long-term survival. They are necessary for people, as the exploration of the new is a major driver in their search for meaning.

Where innovation comes from in the current world? Technology of course is still a major driver. But is not enough anymore; both because technologies are increasingly accessible worldwide, and because the level of sophistication of technologies moves the focus from how technologies are developed to how they are chosen, integrated and used.

Innovation comes from the capability to capture the evolution of the context, to make sense of a complex environment, to combine the several opportunities that are today available, into an unprecedented vision. A vision that is made of powerful ecosystems of products, services, organizational processes, communication approaches, spaces, all integrated into a winning strategy and business model. The current scenario, in short, requires the capability to conceive, develop, and implement new visions that are both meaningful to people, and economically valuable for businesses.

These are multifaceted capabilities, based on two fields of competences:

- Design, as the set of capabilities that enable to envision new possibilities that are more meaningful to people. In particular, the design of ecosystems consisting of products, services, communication and space, i.e. what we call Product-Service-Systems Design
- Management, as the set of capabilities to transform the idea of a new ecosystem into a source of economic value and growth, by envisioning and implementing new business models.

The Double Degree in Management and Design aims at providing these capabilities, in a unique integrated courses.

1.2 What makes this program unique? A pioneering approach to Management and Design

In the recent years, the fields of Management and Design have been in close interactions. On the one hand in the area of Design Management, i.e. the effective management of Design as a process and function. This has been a focus especially in the '80s and '90s, where major corporations needed to manage in an effective way their design units, and is still a relevant subject, since the management of creative processes and resources requires particular skills.



On the other hand, in the early 2000s the opposite dialogue as also occurred: using design as a way to practice management in a novel, more creative, way. This has promoted the use of Design Thinking in Business School, as a way to help managers to learn how to better understand users' needs and improve creativity. This is also a relevant subject, that at Politecnico di Milano has always been practiced, being our institution a university of Design ("Università del progetto"), which is the common trait of all our programs, from engineering to design, from architecture to management.

The uniqueness of this double degree in Management and Design is that it includes the previous perspectives, but it moves much beyond to address the challenges and opportunities of the new scenario of the next decades. This degree is not only the application of management to design, nor the application of design to management, but the joint combination of both perspectives to develop sophisticated solutions and business models that requires simultaneously the skills of designers and the skills of managers. There is no other similar approach or school that is internationally integrating the design of Product-Service-Systems and business models with this approach.

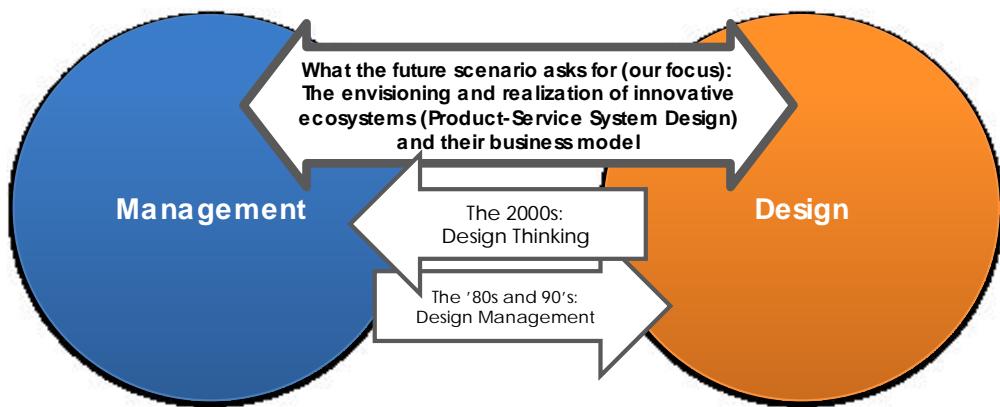
1.3 Why this program is essential for those interested in elevating design? What you get more if you are studying design

Designers nowadays are not asked anymore to simply design products. They need to be capable to conceive sophisticated ecosystems, based on a combination of products, services, communication and spaces, all blended in an innovative business model. This requires not only design competences, but also advanced management skills. In fact, services are significantly based on organizational processes, and the design of business models requires a deep understanding of strategy, economy, and organizational networks, i.e. a deep understanding of management.

1.4 Why this program is essential for those interested in elevating management? What you get more if you are studying management

Leaders nowadays are not asked anymore to simply manage processes and organizations. They need to be capable to innovate and change those processes and organizations. They need to be capable to make sense of complex market contexts, be empathic with people experiences, and create new solutions. This capability of envisioning new directions that are in line with people and society requires advanced design skills. In fact, design provides with the capability of making sense of society and of what people search for in life, and the capability of imagining the new.

The scenario



1.5 Who can I become? The expertise profile of the program

By attending this program, you will develop advanced skills for *Designing and Managing innovative ecosystems (products+services+communication+spaces) and business models*. More specifically, the following capabilities:

- to conceive innovative business models that create value for people and society
- to visualize and narrate those business models so that they can be effectively shared and communicated to other people in an organization, partners, stakeholders and, of course, customers.
- to create value for business, so that your vision is both good for the user and for the organization that creates it (its shareholders, its management and everyone contributing to it)
- to lead the development and implementation process, by engaging other players, so that your vision becomes realized and has a real impact in business and society

Typical jobs for this double degree may include for example professionals working in the following areas: strategy, innovation, marketing, branding, design, business development, project management, always with a strategic perspective.

Organizations that are interested in this profile include all organizations that have a strategy based on innovation, large and small, including start-ups. In the area of “for profit” businesses, but also in not-for-profit organizations.

1.6 Why a double degree? The advantage of being two.

The skills that we have described before cannot be achieved by a program that simply blend a little of design and a little of management. To envision and implement sophisticated ecosystems and business models one



need to master both fields in depth. For this reason, instead of creating a separate program that takes a little from both schools, we have decided to offer to a few selected talented and motivated students the chance to develop in depth both skills, in a clever and effective way.

This implies that you will really attend classes of design and classes of management. You will be immersed in both words, be in touch with other “pure design” students and professors and with “pure management” students and professors. You will thus absorb the way of thinking of both communities, instead of living into a separate world.

And also, being a program (and not an individual curriculum) you will go through this experience with a few other selected students like you. You will have therefore the chances to share, discuss, create a new culture of management and design with a few other likeminded pioneers and with the professors, managers and designers, who are engaged in this program.

2. Enrolment

2.1 Entry requirements

The Management Engineering and Product-Service System Design Double Degree is open to 20 students selected from Management Engineering Master of Science and Product-Service System Design Degree programmes (10 students from each programme).

May Apply to participate in the Double Degree Project in Engineering Management and Product-Service System Design (School of Design) within the deadlines and with the rules defined in this Call, the students of the Politecnico di Milano enrolled for the academic year 2016/2017 in the first year (and first semester regarding students Product Service System):

Prerequisite for the continuation in the Double Degree Project for the students in Product-Service System Design (School of Design) is the achievement of the 1st year Design Studios. Students admitted to the Double Degree Project which in July 2017 resulted not in compliance with the 1st year Design Studios, cannot continue in this Double Degree Project;

Applications for the Internal Double Master of Science degree may be submitted, in compliance with the rules set out in this Teaching Regulation <http://www.polimi.it/it/corsi/corsi-di-studio/elenco-dei-corsi/> , by students of the Politecnico di Milano enrolled in:

- Master of Science (equivalent to Laurea Magistrale) Programme in Product-Service System Design (School of Design);
or
- Master of Science (equivalent to Laurea Magistrale) Programme in Management Engineering.



Hence, **students enrolled in “individual” courses (equivalent to Corsi Singoli) cannot apply to the Double Master of Science Degree in Management Engineering - Product-Service System Master of Science Design.**

To apply for the Double Master of Science degree, students should fulfil the admission requirements outlined in the Teaching regulations of each study course <http://www.polimi.it/index.php?id=4140>

- Master of Science (equivalent to Laurea Magistrale) Programme in Product-Service System Design (available at):
https://www4.ceda.polimi.it/manifesti/manifesti/controller/extra/RegolamentoPublic.do?jaf_currentWFID=main&EVN_DEFAULT=evento&aa=2016&k_corso_la=1159&lang=EN)
- Master of Science (equivalent to Laurea Magistrale) Programme in Management Engineering - Stream: DMI – Design Management, Innovation and Entrepreneurship (Industrial Engineering and IT School) (available at):
https://www4.ceda.polimi.it/manifesti/manifesti/controller/extra/RegolamentoPublic.do?jaf_currentWFID=main&EVN_DEFAULT=evento&aa=2016&k_corso_la=479&lang=EN)

2.2 Articulation of the selection process and general criteria used for students' selection

Students from Politecnico di Milano interested in applying for the Internal Double Master of Science degree in Management Engineering – Product-Service System Design, must submit (by their own institutional e-mail) the documents within the timeframe that will be published on the Course website (at <http://www.ingindinf.polimi.it/en>; and <http://www.design.polimi.it/?lang=en>), to the following addresses:

- School of Design students: doppielaureeinterne-scdes@polimi.it
- Management Engineering students: management-engineering@polimi.it

List of the documents required:

- A motivation letter where the candidates describes the reasons for the application in the Double Degree and the contribution that they will offer to the community of the project;
- Academic CV of the Bachelor Degree obtained at other universities, with self-declaration of transcripts with marks and the final degree grade;
- Personal CV outlining skills and extra-bachelor experiences (portfolio of projects, work experiences, workshops and summer schools, etc.) and that highlights experience and skills acquired consistent with the second degree;
- A portfolio of projects (final thesis as well as additional projects undertaken in other courses or workshops) if the applicant is from the School of Design;
- An extended abstract of the final thesis/overview of the Business Game experience if the applicant is from the School of Engineering.

The project portfolio must not exceed 10 MB.

The extended abstract of the final thesis must not exceed 5 standard Word pages.

An evaluation Committee composed by professors appointed by the Study Course of Product Service System Design and the Study Course of Management Engineering, will be in charge of the candidates' selection process.

The Committee will make a first evaluation of the academic background, the motivation letter and the CV of the candidate and will assign up to 70 points as follows:

- Motivation letter, up to 20 points assigned;
- Academic CV of the Bachelor Degree obtained at other universities, with self-declaration of transcripts with marks and the final degree grade, up to 20 points assigned;
- Personal CV, up to 15 points assigned;
- Project portfolio (for the Design School) or thesis (for the Industrial Engineering and IT School), up to 15 points assigned.

Candidates who are assigned **at least 60 points** will be interviewed individually.

The same Committee will do a second evaluation based on a individual interview that will assess:

- The extent to which the Double Degree is consistent with the candidate's expectations and motivations;
- The extent to which the objectives of the Double Degree are consistent with the specific skills acquired by the candidate during the Bachelor's Degree and through other curriculum experiences;
- The extent to which the candidate is motivated to acquire knowledge in the areas covered by the Double Degree in particular with respect to the second degree (evaluated via questions during the individual interview and the development of a case study).

The one-to-one interview will be assigned **a maximum of 30 points**.

2.3 Main deadlines and time-frame

The deadlines of the selection process will be published on the Course websites (at www.dig.polimi.it/internaldd and <http://www.ingindinf.polimi.it/en/didactics/internal-double-degree-projects/> and at <http://www.design.polimi.it/regolamenti-didattici/?lang=en>

This year, the call for applications will follow this timeline:

- Presentation of candidate applications: by January 13th 2017 at 12.00 (noon)
- Selection process and interviews: between January 13th 2017 and February 15th 2017
- Publication of the final results and formal acceptance by candidates: by February 20th 2017

3. Tuition fees



Details will be published on the University websites: <http://www.polimi.it/en/students/from-enrolment-to-degree/fees/> and http://www.polimi.it/uploads/media/Tuition_Fees_and_Exemptions_Guide_Magistrale-MSc_2016-17.pdf)

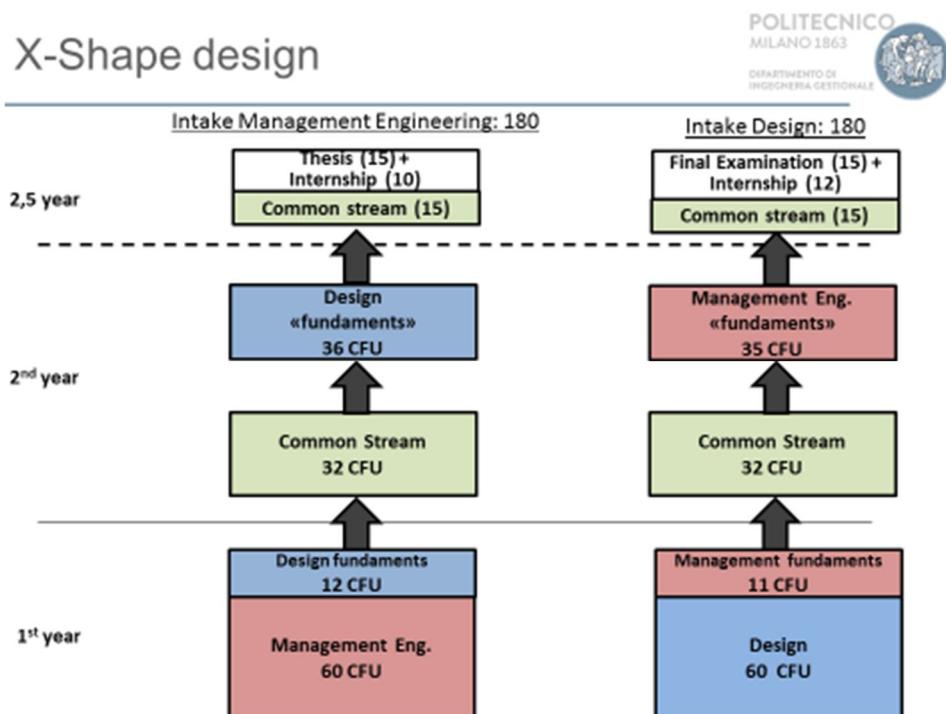
4. Study Plan

4.1 General framework of the double degree

The double degree is founded on two Master of Science programs of Politecnico di Milano: the Program on Management Engineering (from the School of Management) and the Program on Product Service Systems Design. These are the two programs you will enrol.

You can start the double degree from one or the other according to your specific inclination and background: i.e. an intake from management or from design. This enable you to go deeper first in one of the two topics, then move to the other, and finally integrate them together.

The program therefore is organized as shown in the diagram below:



If you start with a focus on management, therefore you will:

- First develop the skills and thinking attitude of management, with basic courses from our Management School, ranging from Strategy, Marketing, Leadership, Innovation, Economics, Operations and Logistics, Accounting & Finance.



- Then you introduce a design dimension to management, with courses that integrate management and design (design strategy, management of design projects, brand management, business model design)
- Then deepen the skills in design of product-service-systems, with courses from our Design School, ranging from design methods and processes, design culture, design strategy, economics, innovation, user and social innovation, system design, sustainable design, the design of ecosystems and services, visualization and narration, in a blend of courses and design workshops.
- Finally, you conclude with activities where concepts you have learned along the program come together: design management lab, internship and thesis.

Similarly, if you start with a focus on design you will:

- First develop the skills and thinking attitude of design, with basic courses from our Design School, ranging from design methods and processes, design culture, user and social innovation, system design, sustainable design, the design of ecosystems and services, visualization and narration, in a blend of courses and design workshops.
- Then you introduce a management dimension to design, with courses that integrate management and design (design strategy, management of design projects, brand management, business model design)
- Then deepen the skills in management, with courses from our Management School, ranging from Strategy, Marketing, Leadership, Innovation, Economics, Operations and Logistics, Accounting & Finance.
- Finally, you conclude with activities where concepts you have learned along the program come together: design management lab, internship and thesis.

4.2 Detailed description of the study programme for the Intake Management (PSPA)

First year courses

Code	Act	SSD	Course title	Type	Sem	ECTS	ECTS group
096076		ING-IND/35	Leadership and Innovation		2	10	10
096080		ING-IND/35	Strategy and Marketing		1	10	10
096089		ING-IND/17	Logistics Management		2	10	10
096088		ING-IND/17	Operations Management		2	10	10
096078		ING-IND/35	Accounting, Finance and Control		1	10	10
096092		ING-IND/35	Business and Industrial Economics		2	10	10
098364		ICAR/13 L-ART/06	Visualization and Prototyping		2	6	6
099956		M-PSI/01 ICAR/13	Network and services		2	6	6



Second year courses (PSPA PS3 – link PS2)

Code	Act	SSD	Course title	Type	Sem	ECTS	ECTS group
097920		ICAR/13 M-DEA/01	Design methods		1	6	6
097918		L-ART/03	Culture & History		1	6	6
098498		ING-IND/35	Design Strategy and Economics of Innovation		1	10	10
098359		ICAR/13	Design Seminar		2	6	6
099961		ICAR/12 ICAR/13	Product service system design studio – Service design		2	12	12
089860		SPS/08	User and Social Innovation		2	6	6 Uno a scelta
092050		ICAR/13	System Design for Sustainability		2	6	
097317		ING-IND/35	Management of Design and Innovation Projects		2	5	5
098449		ICAR/13	Branding and Communication		2	6	6
098448		ICAR/12	Professional Workshop		2	6	6
097325		ING-IND/17 ING-IND/35	Digital Business Innovation		2	5	5

Third year courses

Code	Act	SSD	Course title	Type	Sem	ECTS	ECTS group
098510		ING-IND/35 ICAR/13	Design Management Lab		1	15	15
098461		--	Internship		1	10	10
098462		--	Final Examination		1	15	15

4.3 Detailed description of the study programme for the Intake Product Service System Design (PSPA PS1 or PS2)

First year courses (registered 2016/17)

Code	Act	SSD	Course title	Type	Sem	ECTS	ECTS group
099947		-	Teambuilding		1	6	6
097919 097918		ING-IND 35 L-ART/03	Business Innovation or Culture and History		1	6	



097920		ICAR/13 M-DEA/01	Design methods		1	6	6
099948		ICAR/16 ICAR/13 ICAR/12	Innovation studio		1	12	12
099953		ICAR/13 INF/01	UX-DESIGN		1	6	6
096654 + 096655		ING-IND/35	Leadership and Innovation		2	6+5	11
098359		ICAR/13	Design seminar		2	6	6
099956		M-PSI/01 ICAR/13	Network and services		2	6	6
098364		L-ART/06 ICAR/13	Visualization and prototyping		2	6	6
099960 099961		ICAR/12 ICAR/13	Product service system design studio - Environmental design Or Product service system design studio - Service design		2	12	12

Second year courses (registered 2015/16)

Code	A ct	SSD	Course title	Type	Sem	ECTS	ECTS group
097360		ING IND/35	Design strategy and economics of innovation		1	10	10
098449		ICAR/13	Branding and communication		2	6	6
096089		ING- IND/17	Logistics Management*	1-2	10	10	10
096088		ING- IND/17	Operations management*				
097317		ING- IND/35	Management of design and innovation projects		2	5	5
096092		ING- IND/35	Business & industrial economics**		2	20 (scelta)	20



096080	ING-IND/35	Strategy and marketing**		1	di due su tre)
096078	ING-IND/35	Accounting, finance and control**		1	
097327	ING-IND/17	Product life cycle management		2	5
097325	ING-IND/17 INC	Digital business innovation		2	5
098448	Tirocinio ICAR/ 12	Professional workshop		2	6

Third year courses (registered 2014/15)

Code	Act	SSD	Course title	Type	Sem	ECTS	ECTS group
097416		ING-IND/35 ICAR/13	Design Management Lab		1	15	15
098461		--	Internship		1	12	12
098462		--	Final Examination		1	15	15

Withdrawal from the Double Degree programme must follow the procedures and timeframes established by the School's schedules.

Students applying to the Double Degree may apply for ASP (Alta Scuola Politecnica), the Erasmus + and non-EU international mobility programmes. **However, if students are selected for both programmes, they must withdraw from one of them as per the relevant procedures and timeframes.**

Any delay in communicating withdrawal from the Double degree programme will seriously affect replacement candidates and cause administrative difficulties.

Students who undertake the Double degree programme and decide to finish their studies after completing only one of the degrees must present a new study plan detailing a change in curriculum/PSPA (previously approved study plan), within the established deadline.

The Dean of the School of Industrial and Information Engineering

F.to Prof. Giovanni Lozza



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The Dean of the School of Design

F.to Prof. Luisa Collina

Documento firmato digitalmente ai sensi della normativa vigente