POLITECNICO
MILANO 1863

# Internal Double Degree
## (Intake 2024/25)
## Management Engineering and Product-Service System Design

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## 1. Enrolment

### 1.1    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 2024/2025 in the first year (and first semester regarding students Product Service System):

Applications for the Internal Double Master of Science degree may be submitted, in compliance with the rules set out in this Teaching Regulation:

https://www.design.polimi.it/en/education/internal-double-degrees

https://management-eng.polimi.it/en/master-of-science/internal-double-degrees/

Prerequisites needed only for students enrolled in the Product-Service System Design CdLM.
(School of Design) is
Successful completion of 1st Year Laboratories.
Students admitted to the Dual Degree Project who are not in good standing with the 1st year Labs as of July 2025 will not be allowed to continue in this degree program.

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.**

Given the special nature of the course, enrolment in the PSSD&ME double degree is incompatible with enrolment in foreign double degrees or other Master's degree courses inside and outside the University.

- **1.2    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, have to participate in the call published on the School's websites. The call is accessible through **On Line Services Applications form→ Selection procedures→ and upload the following documents:**

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, 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, 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 an 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** by the Evaluation Committee

The interview is considered as passed with an assessment **of at least 20 points.**

The final score assigned of each applicant - in terms of ranking - will be equal to the sum of the two scores

In the event of a tie, the gender balance is taken into account, the minority among the candidates placed in a higher position in the same ranking prevails. In the event of a further tie, the candidate with the least seniority prevails.

### 1.3    Main deadlines and time-frame

This year, the call for applications will follow this timeline:
- Presentation of candidate applications: by December 10th, 2024, at 12.00 p.m. (noon)
- Notification of the results of the screening stage: December 18th, 2024
- Interviews: January 9th, 2025 from 11:00 a.m.
- Publication of the final results: by January 22nd, 2025
- Acceptance by candidates: from 23rd to 30th January 2025

The deadlines of the selection process will be published on the Course websites at

https://www.design.polimi.it/en/education/internal-double-degrees

and at

https://management-eng.polimi.it/en/master-of-science/internal-double-degrees/

The duration of the Internal Double Degree programme is at least six semesters for a total of 180 CFUs

## 2   Withdrawals

Students must send their withdrawals to the following e-mail addresses:

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

Students applying to the Double Degree may apply for ASP (Alta Scuola Politecnica), the Erasmus and 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 deadlines.

## 3.   Admitted candidates

Starting from the A.Y. 2023/24 candidates, who have formally accepted to partecipate to the Internal Double Degree, will have to attend a compulsory study plan which cannot be changed. The list of the exams of the programs are listed on the current Educational Rules of the two programs

## 4.   Tuition fees

Details will be published on the University websites:

https://www.polimi.it/studenti-iscritti/tasse-borse-e-agevolazioni-economiche

https://www.polimi.it/en/current-students/tuition-fees-scholarships-and-financial-aid

The pathway of the internal double degree PSSD&ME has necessarily been built with supernumerary credits to obtain the first degree and subsequently the second, the law excludes these credits from the DSU calculation, therefore students enrolled in Product Service System Design or Management engineering must only calculate the actual credits in their pathway indicated in the tables of this notice (column actual credits first degree) and the Regulation of the internal double degree PSSD&ME

Please also note that, by law, the DSU benefit may be granted for the achievement of the first degree for no more than 5 semesters, starting from the year of first enrolment in the Master's degree programme, therefore it may not be requested for the achievement of the second degree envisaged in the pathway.

## 5. Data Treatment

Pursuant to EU Regulation no. 679/2016, candidates are informed that the processing of personal data supplied by them during the assessment for participation in internal Double Degree projects procedure or otherwise  acquired for this purpose by the Politecnico di Milano is aimed solely at carrying out the assessment activities for the assignment the activities and will be carried out by the persons in charge, including the examining commission, at the Politecnico di Milano, using also computerized procedures, in the ways and within the limits necessary to pursue the aforementioned purposes, even in the case  of possible communication to third parties. The provision of such data is necessary to verify the requirements for participation and the possession of securities and their failure may include such verification. The data will be stored, in accordance with the provisions of current legislation, for a period of time not exceeding that necessary to achieve the purposes for which they are processed.

The candidates are recognized the rights referred to the third chapter of EU Regulation no. 679/2016, in particular, the right to access their personal data, to request correction, updating and cancellation, if incomplete, erroneous or collected in violation of the law, as well as to oppose their processing for legitimate reasons by addressing requests to the person responsible for the protection of personal data, contact point: privacy@polimi.it. Data controller: Politecnico di Milano –General Management, Piazza Leonardo da Vinci 32, 20133 Milan.

Milano, 2 October 2024

The Dean of the School of Industrial and Information Engineering

Prof.  Antonio Capone

The Dean of the School of Design

Prof. Francesco Zurlo

# 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.

## 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. Study Plan

- **General structure of the Double Degree**

The Double Degree is based on two Laurea Magistrale (equivalent to Master of Science) programs at Politecnico di Milano: the Management Engineering program (from the School of Management) and the Product-Service Systems Design programme (from the School of Design) to which students will be enrolled. It is possible to access the Double Degree from Management or Design programmes. This allows students togo deeper into one of the areas first, then focus on the other, and finally integrate them.

The programme is organised as shown in the diagram below:
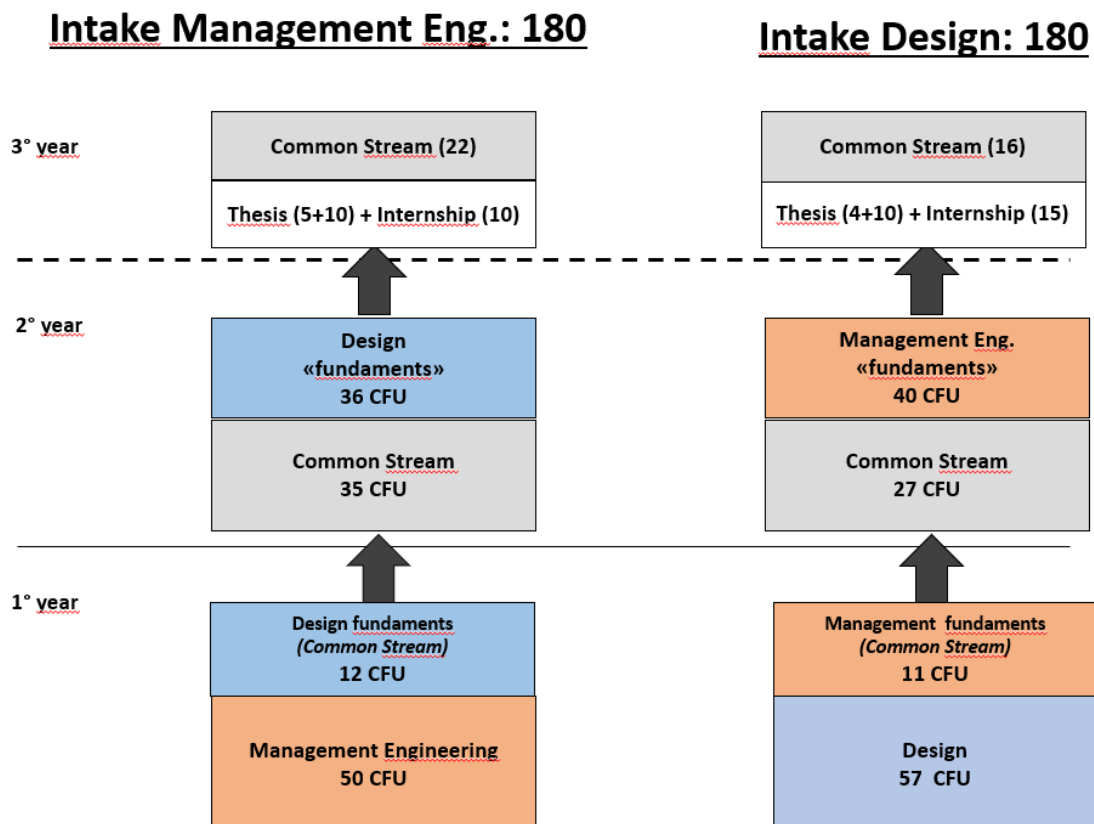
**Starting the programme from Management, the student will:**

- develop management skills and approaches using basic courses from the School of Management, including Strategy & Marketing, Leadership & Innovation, Business and Industrial Economics of Innovation, Strategic Innovation, Operations Management, Logistics Management, Accounting, Finance an Control.
- integrate design into management, using dedicated courses: Design Thinking for Business, Vision Change, Agile Innovation, Branding & Communication, Digital Business, Design and Corporate Economics.
- acquire Product-Service-System Design skills, with courses from the School of Design, including Design & Research Methods, Product Service System Studio, Product Service System Design for Sustainability, Service Design and Innovation, Public and Social Change, Data and service design e Design Seminar.
- Conclude the course with activities where the concepts learned during the programme are integrated: Business Design and Transformation Lab, Professional Workshop, Internship e Tesi.


**Starting the programme from Design, the student will:**

- develop design skills and approach, using basic courses from the School of Design, including Teambuilding, Innovation Studio, Product Service System Design Studio, Design & Research Methods, Ux- Design, Services Design and Innovation, Data and Service Design, Business Innovation and DesignSeminar.
- Integrate management into design, with dedicated courses: Design Thinking for Business, Vision and Change, Agile Innovation, Branding & Communication, Digital Business;
- acquire management skills, using courses from the School of Management, including Strategy & Marketing, Leadership and Innovation, Strategic Innovation, Operations Management, Logistics Management, Accounting Finance and Control, Business & Industrial economics, Supply Chain Innovation;.
- Conclude the course with activities where the concepts learned during the programme are integrated: Business Design and Transformation Lab, Internship and Thesis.


**A prerequisite for admission to the pathway, only for students enrolled in the Product-Service System Design degree program (School of Design), is successful completion of the 1st-year Labs**
**Students admitted to the Double Degree project who fail to pass the 1st year Labs in July 2025 will not be allowed to continue in this course.**

**MOOC**

**For students enrolled in the CdLM Product Service System:**

Before taking the exam for the courses of the Laurea Magistrale (equivalent to Master of Science) in Management Engineering, you must pass the following **three** MOOCs by the February 2026 (first examination session of the 2nd year of enrolment at the Politecnico di Milano)

- Fundamentals of Financial and Management Accounting (<u>only if</u> the study plan includes theAccounting, Finance and Control course)
- Fundamentals of Organisation
- Fundamentals of Economics

Students who do not have the Accounting, Finance and Control course in their plan may choose one of thesetwo MOOCs instead of Fundamentals of Financial and Management Accounting.

- Fundamentals of Operation
- Fundamentals of Strategy

**For students enrolled in CdLM Management Engineering:**

Applicants must refer to the Educational Rules - Regulations of the Laurea Magistrale (equivalent toMaster of Science) in Management Engineering.

For students of both courses, MOOCs from the "Introduction to Management Engineering Series" library areprovided free of charge via the Polimi Open Knowledge (POLIMI POK) platform: https://www.pok.polimi.it/

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

**First year courses**

| SSD | Teaching title | Sem | ECTS | Effective first title | Effective second title |
|---|---|---|---|---|---|
| ING-IND/35 | Strategy & Marketing | 1 | 10 | ✔ | |
| ING-IND/35 | Accounting, Finance and Control | 1 | 10 | ✔ | |
| ING-IND/17 | Operations Management | 1 | 10 | ✔ | |
| ING-IND/35 | Leadership & Innovation | 2 | 10 | ✔ | |
| ING-IND/35 | Business & Industrial Economics | 2 | 10 | ✔ | |
| ICAR/13 L-ART/06 | Data and Service Design | 2 | 6 | | ✔ |
| M-PSI/01 ICAR/13 | Service Design and Innovation- Public and Social Change | 2 | 6 | | ✔ |
| | | | | **50** | **22** |

**Second year courses (PSPA PS3 – link PS2)**

| SSD | Teaching title | Sem | ECT S | Effettivi Effective first title | Effective second title |
|---|---|---|---|---|---|
| ING- IND/17 | Logistics Management | 1 | 10 | ✔ | |
| ING- IND/35 | Design Thinking for Business | 1 | 5 | ✔ | ✔ |
| ING- IND/35 | Strategic Innovation | 1 | 5 | ✔ | |
| ING- IND/35 | Vision and Change | 1 | 5 | ✔ | ✔ |
| ICAR/13 | System Design for Sustainability | 1 | 6 | | ✔ |
| ICAR/13 M-DEA/01 | Design & Research Methods | 1 | 6 | | ✔ |
| ING- IND/35 | Agile Innovation | 2 | 5 | ✔ | ✔ |
| ING- IND/17 ING- IND/35 | Digital Business | 2 | 5 | ✔ | |
| ICAR/13 | Design Seminar | 2 | 6 | | ✔ |
| ICAR/12 ICAR/13 | Product Service System Design Studio | 2 | 12 | | ✔ |
| ING- IND/35 | Design and Corporate Economics | 2 | 6 | | ✔ |
| | | | | **35** | **51** |

**Third-year courses**

| SSD | Teaching title | Sem | ECTS | Effective first title | Effective second title |
|---|---|---|---|---|---|
| ICAR/12 | Professional Workshop | 1 | 6 | | ✓ |
| ICAR/13 | Branding and Communication | 1 | 6 | | ✓ |
| -- | Internship | 1 | 10 | ✓ | ✓ |
| -- | Thesis | 1 | 5 | ✓ | ✓ |
| -- | Thesis | 2 | 10 | ✓ | ✓ |
| ING- IND/35 ICAR/13 | Business Design and Transformation Lab | 2 | 10 | ✓ | ✓ |
| | | | | **35** | **47** |

**Detailed description of the Study Plan for admission from Product Service System Design (PSPA)**

**First year** courses (PSPA PS1 or PS2)

| SSD | Teaching title | Sem | ECTS | Effective first title | Effective second title |
|---|---|---|---|---|---|
| - | Teambuilding | 1 | 3 | ✓ | ✓ |
| ING–IND 35 | Business Innovation or Business innovation-come creare valore con l'innovazione | 1 | 6 | ✓ | |
| ICAR/13 M-DEA/01 | Design & Research Methods | 1 | 6 | ✓ | |
| ICAR/16 ICAR/13 ICAR/12 | Innovation Studio | 1 | 12 | ✓ | |
| ICAR/13 INF/01 | UX-Design | 1 | 6 | ✓ | |
| ING-IND/35 | Leadership and Innovation (inserted ex officio after the selection) | 2 | 6 | ✓ | ✓ |
| ING-IND/35 | Leadership and Innovation (integration) (inserted ex officio after the selection) | 2 | 6 | | ✓ |
| M-PSI/01 ICAR13 | Service Design and Innovation- Public and Social Change o Smart Service **\*** | 2 | 6 | ✓ | |
| L-ART/06 ICAR/13 | Data and service design (ex Visualization and Prototyping) | 2 | 6 | ✓ | |
| ICAR/12 ICAR/13 | Product service system design studio | 2 | 12 | ✓ | |
| | | | | **63** | **14** |

\* students will be allocated according to a balancing criteria

## Second year courses (PSPA PS3)

| SSD | Teaching title | Sem | ECTS | Effective first title | Effective second title |
|---|---|---|---|---|---|
| ING-IND/35 | Business & Industrial Economics | 2 | 20 (scelta 2 su 3) | | ✓ |
| ING-IND/35 | Strategy & Marketing | 1 | | | |
| ING-IND/35 | Accounting, Finance and Control | 1 | | | |
| ING-IND/17 | Logistics Management | 1-2 | 10 (a scelta) | | ✓ |
| ING-IND/17 | Operations Management | 1-2 | | | |
| ING-IND/35 | Design Thinking for Business | 1 | 5 | | ✓ |
| ING-IND/35 | Strategic Innovation | 1 | 5 | | ✓ |
| ICAR/13 | Vision and Change | 1 | 6 | ✓ | ✓ |
| ING-IND/17 | Supply Chain Innovation | 2 | 5 | | ✓ |
| ING-IND/35 | Agile Innovation | 2 | 5 | | ✓ |
| ING-IND/17 | Digital Business | 2 | 5 | | ✓ |
| ICAR/13 | Design Seminar | 2 | 6 | ✓ | |
| | | | | **12** | **61** |

## Third-year courses (PSPA PS3)

| SSD | Teaching title | Sem | ECTS | Effective first title | Effective second title |
|---|---|---|---|---|---|
| ICAR/13 | Branding and Communication | 1 | 6 | ✓ | ✓ |
| -- | Internship | 1 | 15 | ✓ | ✓ |
| -- | Thesis | 1 | 4 | ✓ | ✓ |
| -- | Thesis | 2 | 10 | ✓ | ✓ |
| ING-IND/35 ICAR/13 | Business Design and Transformation Lab | 2 | 10 | ✓ | ✓ |
| | | | | **45** | **45** |