



**POLITECNICO  
MILANO 1863**

Milano

# **POLITECNICO DI MILANO**

## **School of Industrial and Information Engineering and TSINGHUA UNIVERSITY**

### **DOUBLE DEGREE IN MANAGEMENT SCIENCE AND ENGINEERING**

#### **Dual Degree General Requirements**

A maximum of 5 students from each university per Academic Year will take part in the programme. For Politecnico students the minimum GPA required to apply to this programme is 25/30.

The students will spend the first year of study at their Home University; the Host University will recognize credits that students have obtained at the Home University. Then they will spend the second year at the Host University.

Finally, they will spend one last semester at their Home University: during this period, students will be working on their research and preparing their final thesis.

During the second year, students will be required to do the following:

- At Tsinghua: earn a minimum of 25 Tsinghua course credits and complete a “mini-thesis” for approximately 200 working hours (equal to 10 ECTS credits)
- At Polimi: earn 60 ECTS credits.

One Credit/hour at Tsinghua University corresponds to two ECTS Credits at Politecnico di Milano.



	1 & 2 Semester	3 & 4 Semester	5 Semester
Tsinghua students	Coursework at Tsinghua (30 credits/60 ECTS)	Coursework at Polimi (30 credits/60 ECTS)	Master Thesis at Tsinghua
Politecnico students	Coursework at Polimi (60 ECTS)	Coursework at Tsinghua (25 credits/50 ECTS) + Mini-Thesis (200 hours/10ECTS)	Master Thesis at Polimi

The detailed Degree structure can be found below.  
Semesters at the two institutions are structured as follows:

- **Tsinghua University:**
  - Spring semester: from end of February to mid- July
  - Fall semester: from end of August to mid-January
- **Politecnico di Milano:**
  - Summer semester: end of February to end of July
  - Winter semester: end of September to beginning of February

### Thesis Requirements

The thesis must be written in the student's native language (or English for those who do not use Chinese or Italian as their native language).

The Master thesis projects should be supervised by professors belonging to the students' Home Institution, but can also be jointly supervised by professors belonging to both institutions.

The Host Institution recognizes the defence result earned at the Home Institution; a short summary of the Master thesis (in English, of about 10-20 pages) should be submitted to the Host institution. To obtain the Politecnico Dual Degree title, a 30 ECTS credits worth thesis is required; Tsinghua students must pass the Master thesis defence at Tsinghua and submit a short summary in English to Politecnico, and this will be defended during one of the final exam calls (4 per year).

To obtain the Tsinghua Dual Degree title, Politecnico students must pass the Master thesis defence at Politecnico and submit an executive summary in English to Tsinghua.



The defence may be presented in the means of a video conference.

## Dual Degree Programme Structure

Please note: course offerings at both institutions may vary in time. Should this occur, appropriate substitutes will be found with the support of the Academic Advisors

### Part I. a Polimi Curriculum for Tsinghua students: Advanced Manufacturing

COURSES	Sem	ECTS	
Production for Made in Italy Lab	2	10	10
Manufacturing Systems Engineering	1	10	10
Manufacturing Systems Planning	1	10	10
Additive Manufacturing	1	5	
De-Manufacturing	1	5	20
Safety Engineering and Mgtm	1	5	
International Distribution	2	5	
Management of Design and Innovation Projects	2	5	
Accounting, Finance & Control	1-2	5-10	10

### Part I. b Polimi Curriculum for Tsinghua students: Industrial Management

COURSES	Sem	ECTS	
Industrial Mgmt Lab & Toolbox	1-2	15	15
Asset Lifecycle Mgmt	1	10	
Industrial Project Mgmt	1	10	10
Operations Risk Mgmt and Resilience	1	5	



Quality Mgmt	1	5	5
Additive Manufacturing	1	5	
De-Manufacturing	1	5	
Safety Engineering and Mgmt	2	5	20
International Distribution	2	5	
Mgmt of Design and Innovation Projects	2	5	
Digital Business Innovation	2	5	
Product Lifecycle Mgmt	2	5	
Supply Chain & Purchasing Mgmt	1	5	
Accounting, Finance & Control	1-2	5-10	10

**Part I. c Polimi Curriculum for Tsinghua students: Supply Chain Management**

<b>COURSES</b>	<b>Sem</b>	<b>ECTS</b>	
Supplier Relationship Mgmt Lab	2	10	10
Advanced Supply Chain Planning Lab	2	10	10
Supply Chain Mgmt	1	10	10
Digital Business Innovation	2	5	
Operations Risk Mgmt and Resilience	1	5	20
Quality Mgmt	1	5	
International Distribution	2	5	
Accounting, Finance & Control	1-2	5-10	10

**Part I. d Polimi Curriculum for Tsinghua students: Sustainable Operations Mgmt & Social Innovation**

<b>COURSES</b>	<b>Sem</b>	<b>ECTS</b>	
Business in Transformation: Social & Sustainability Challenges Lab	1	15	15
Advanced and Sustainable Manufacturing	1	10	10
Social Innovation	1	5	5
Health Care Mgmt	2	5	
De-Manufacturing	1	5	20
Economics of Network Industries	1	5	
International Distribution	2	5	
Operations Risk Management & Resilience	1	5	
Policy Analysis	2	5	
Accounting, Finance & Control	1-2	5-10	10

**Part II – Tsinghua University Curriculum for Politecnico Students**

<b>COURSES</b>	<b>Course ID</b>	<b>Sem</b>	<b>Academic Hours</b>	<b>Credits</b>
Chinese Language I	60610162	F/S	2	2
Chinese Language II	60610172	F/S	2	2
Chinese Culture and Society	610082	F/S	2	2
Research Seminar	80160041	F/S	1	1
Literature Review & Research Proposal	69990021	F/S	1	1
Social Practice	70160591	F	1	1



China Studies: Industry, Society & Culture		S	3
Quantitative Analysis		F	3
Decision Making	70160513	F	3
Production Mgmt	70160033	F	3
Ergonomics & Work Organization	70160043	S	3
Quality Engineering	70160023	F	3
Engineering & Technology Mgmt	80160323	S	3
Enterprise Information and Integration	80160033	S	3