Welcome!

Prof. Stefano Ronchi
Prof. Evila Piva

October 2nd 2018

Politecnico di Milano:
Mission: *«To be an international university with strong Italian roots»*

Over **1.300** professors and
1.200 professional staff

Over **40.000** students

Schools of
Architecture, Design, Engineering

12 Departments

Ranked **no.1 in Italy**,
no. 6 in Europe, **no. 17 worldwide**
QS World University Ranking 2018,
Engineering & Technology

School of Management:
Mission: *«To impact on society by creating and sharing knowledge at the intersection between engineering, management and economics»*

45
ADJUNCT PROFESSORS

111
CORE FACULTY MEMBERS

OVER
4,900
STUDENTS IN DEGREE PROGRAMMES

129
EXTENDED FACULTY MEMBERS

23%
INTERNATIONAL STUDENTS

26
DEGREE PROGRAMMES

POLITECNICO
MILANO 1863
SCHOOL OF MANAGEMENT

12,000m²
IN THE BOVISA CAMPUS

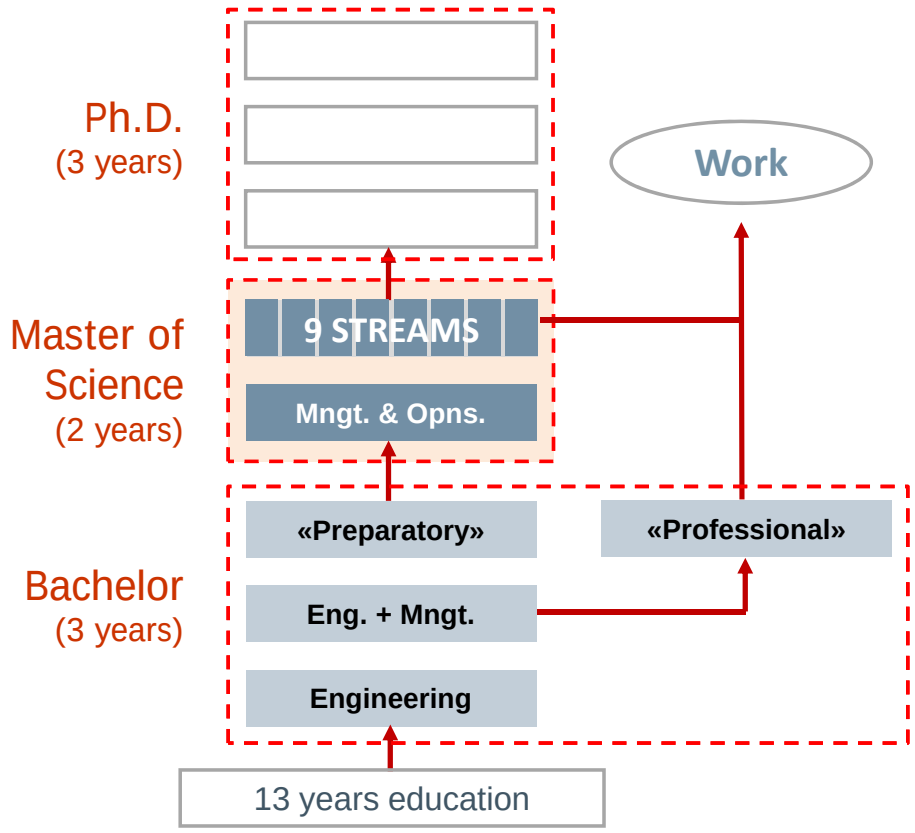
38mio €
TOTAL BUDGET

131
STAFF

OVER
130
EXECUTIVE COURSES AND SEMINARS

OVER
1,400
SCIENTIFIC CONTRIBUTIONS IN THE LAST FIVE YEARS

Management Engineering within the Italian Education context

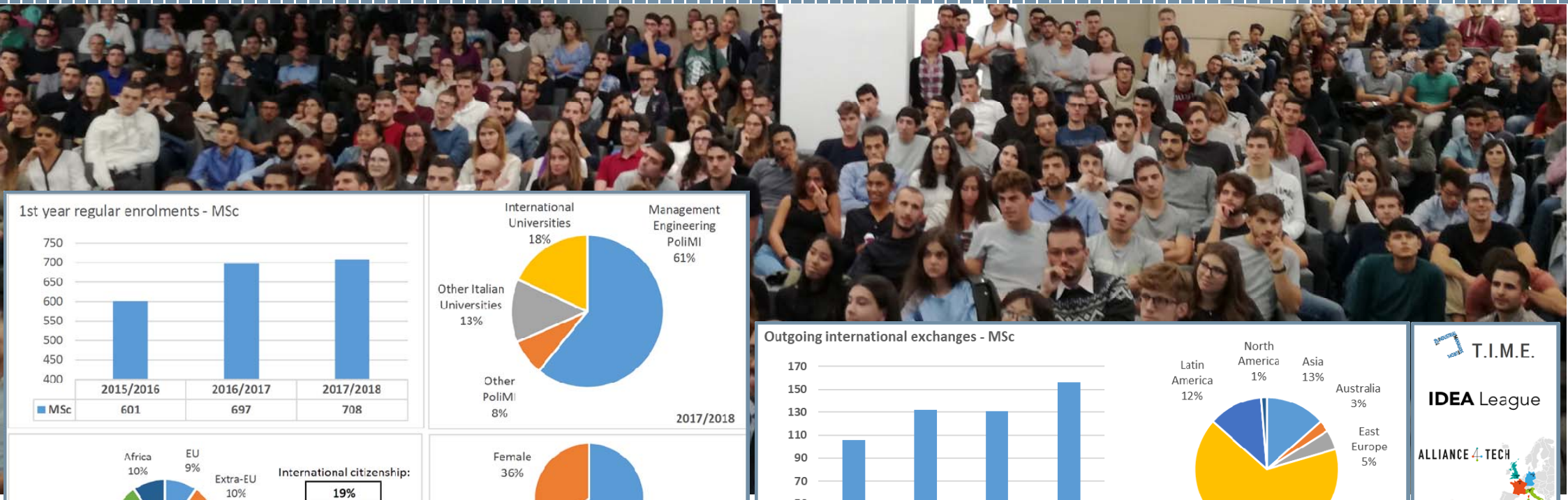


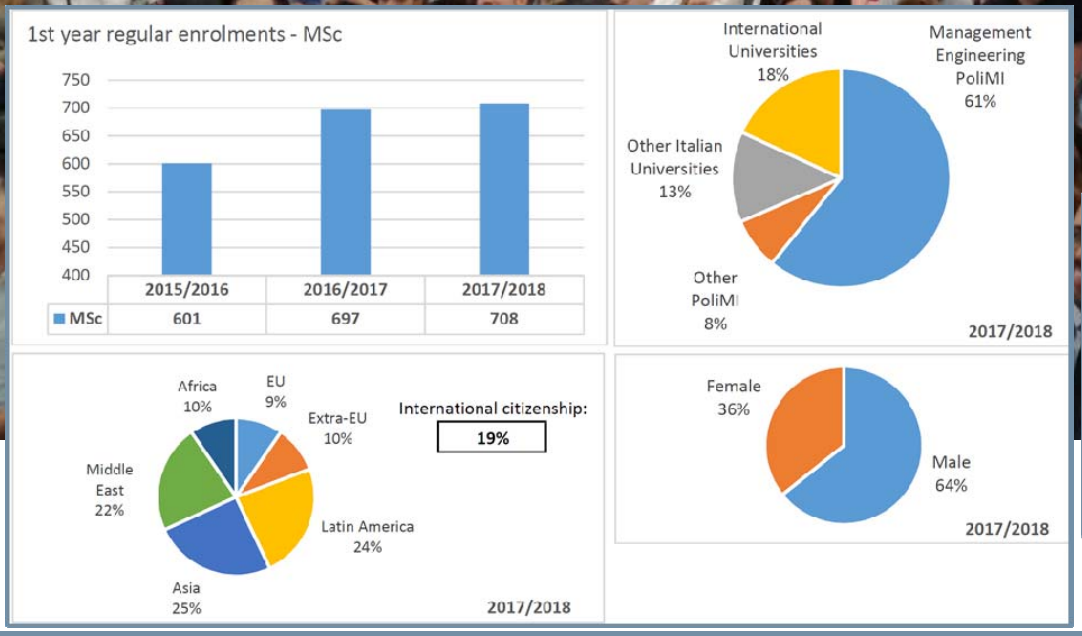
Duration	2 years
Calendar	Sept/Dic – Feb/Jun
Course size	5-15 ECTS
Workload	120 ECTS
Enrolments (≈)	700

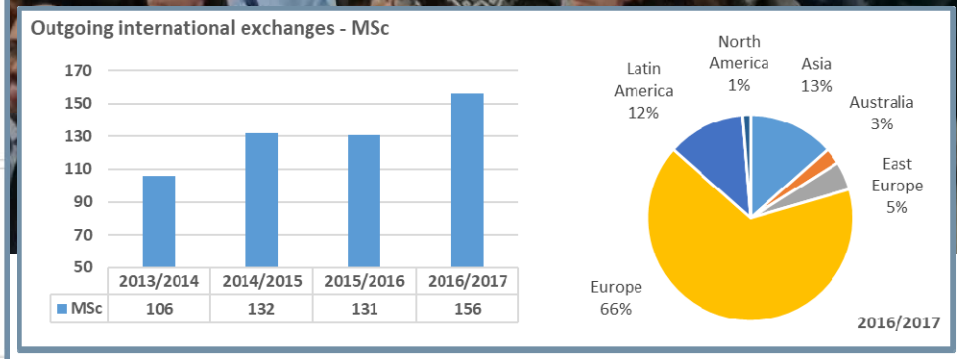
Notes:

- Specific managerial competences based on a solid scientific and engineering background
- 14.000 graduates since the constitution in 1982
- Entirely taught in English
- Over 30% of International students
- Huge opportunities for experiences abroad through exchanges and double degree programs: over 25% of our students have experiences abroad
- Double degrees with other departments

MSc in Management Engineering: some figures







T.I.M.E.

IDEA League

ALLIANCE 4 TECH

UNITECH International

A number of different opportunities

- Access to one of the top universities worldwide
- A real international environment
- Campus and sport life (e.g. Poli4you)
- Deep-dive into concrete business problems (Labs): close interaction with industry
- Double Degrees with other departments

POLITECNICO MILANO LEAGUE 2015 2016

MEL1 & MEL2

Multimedia classroom to facilitate project activities on real problems proposed by companies (MEL1 & MEL2)

- Flexible layout and sofas to support both standard classes and group work activities
- Wi-Fi and Bluetooth video beamers to show multimedia contents of both teacher and students at the same time through computers, tablets, smartphones...
- Writable walls all over the room from floor to ceiling to stimulate creativity and expression
- Moving whiteboards to create cubicles

A number of different opportunities

- **Erasmus** and **extra-UE** agreements (Europe, USA, China, Australia, etc.)
- **Double Degree** programs (T.I.M.E.)
- **UNITECH:**
  - Politecnico di Milano (Italia)
  - Chalmers University of Technology (Svezia)
  - CentraleSupelec (Francia)
  - ETH Zurich (Svizzera)
  - Loughborough University (Inghilterra)
  - RWTH Aachen University (Germania)
  - Trinity College (Irlanda)
  - TU Delft (Olanda)
  - Universitat Politecnica de Catalunya (Spagna)
- **IDEA League:**
  - Politecnico di Milano (Italia)
  - ETH Zurich (Svizzera)
  - TU Delft (Olanda)
  - Chalmers University of Technology (Svezia)
  - RWTH Aachen University (Germania)

T.I.M.E.

UNITECH International

IDEA League

- **Alliance4Tech:**
  - Politecnico di Milano (Milano)
  - Technische Universitat Berlin (Berlino)
  - CentraleSupelec (Parigi)
  - University College London (Londra)

ALLIANCE 4 TECH

Intended Learning Outcomes
MASTER OF SCIENCE IN MANAGEMENT ENGINEERING

1. **Understand** context, functions, processes in a business and industrial environment and the impact of those factors on business performance

2. **Identify** trends, technologies and key methodologies in a specific domain (specialization streams)

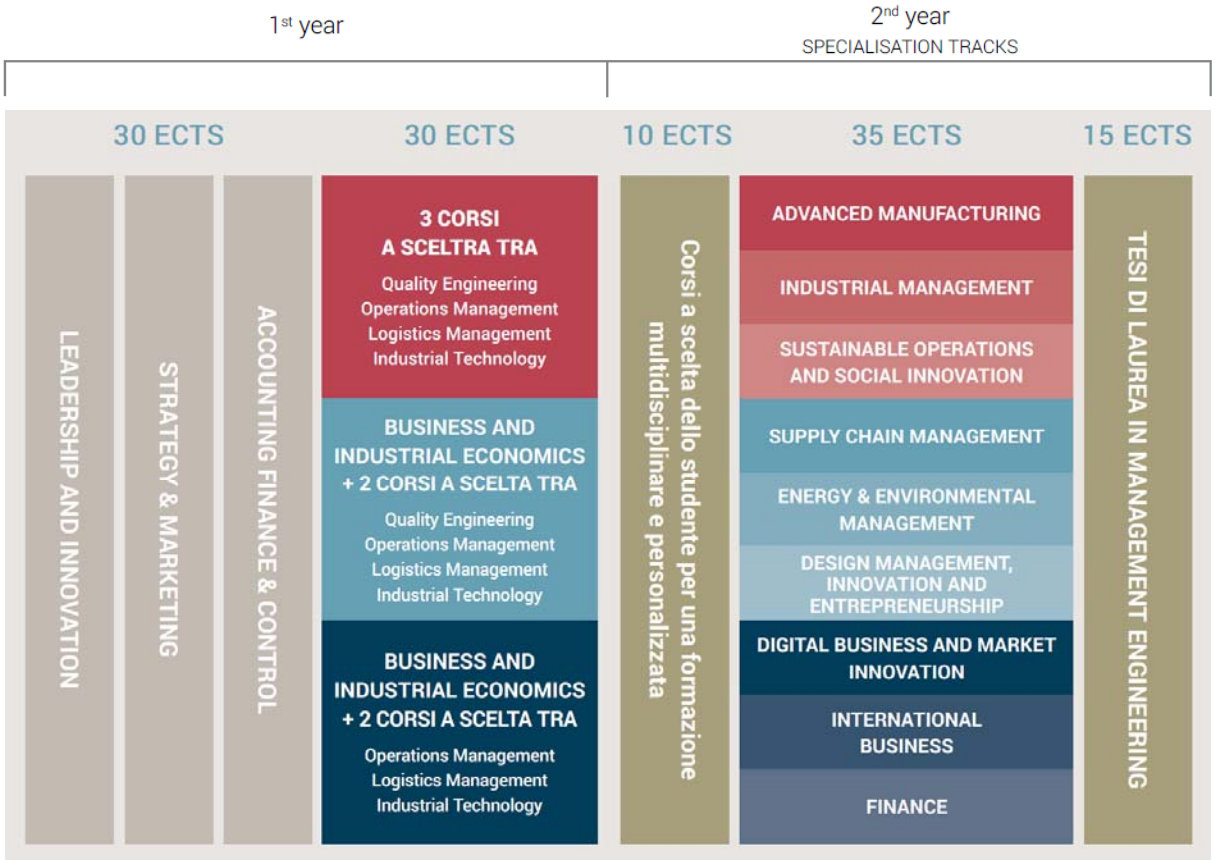
3. **Design** solutions applying a scientific and engineering approach (Analysis, Learning, Reasoning, and Modeling capability deriving from a solid and rigorous multidisciplinary background) to face problems and opportunities in a business and industrial environment

4. **Develop** new ideas and solutions in business and industrial scenarios evolving over time

5. **Interact** in a professional, responsible, effective and constructive way with colleagues in a working environment, also motivating group members

MSc in Management Engineering overall structure

First year focuses on building a common body of knowledge that characterizes the management engineer



Second year is dedicated to developing vertical competencies within specific streams

Every stream ends with a practice-based lab

Admissions

- The application process is performed through the **online system (servizi on line):** http://www.poliorientami.polimi.it/come-si-accede/
- **Admission requirements**:
  - Graduation at the Bachelor in no more than **four academic** years from initial enrolment, i.e. before April 30 of the fifth year after the first enrolment
  - **Adjusted admission threshold** (some integrative exams might be due for students coming from the applicative curriculum):

Category of graduates	***"Adjusted" admission threshold***
Management Engineers from Politecnico di Milano – Bachelor of Science with Introductory curriculum (Propedeutico)	22 + (N-3)/2
Management Engineers from Politecnico di Milano – Bachelor of Science with Applicative curriculum (Applicativo)	23 + (N-3)/2
Other Engineers from Politecnico di Milano	23 + (N-3)/2
Industrial Designers and Architects from Politecnico di Milano	26 + (N-3)/2

- **Timeline for application**: online soon at: http://www.poliorientami.polimi.it/come-si-accede/ammissione-alle-lauree-magistrali/quando-presentare-la-domanda/
- Please, make **1 application only** for management engineering (there is no difference in the application process for the different streams)

INGEGNERIA GESTIONALE

Indagine Occupazionale 2017

Laureati Magistrali intervistati a 12 mesi dalla laurea

I Laureati Magistrali in Ingegneria Gestionale presso il Politecnico di Milano nel 2015 risultano essere 515 così suddivisi: 390 per la sede di Milano e 125 per la sede di Como. Le interviste complessivamente realizzate sono 366 pari al 71,1% del totale.

Campione analizzato

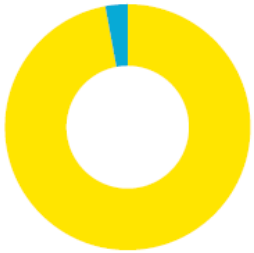
Laureati Magistrali totali

515

Laureati Magistrali intervistati

366

Situazione occupazionale



Tasso di occupazione	**97,1%**
Tasso di disoccupazione	**2,9%**

In quanto tempo trovano lavoro

2,9%	**50,4%**	**31,2%**	**8,3%**	**6,0%**	**1,2%**
Disoccupati / In cerca di prima occupazione	Già occupati al momento della laurea	Entro 2 mesi dalla laurea	Entro 6 mesi dalla laurea	Dopo 7 mesi e oltre	Non indica

Retribuzione mensile media netta

€ 1655

Tipologia di attività

Dipendente	**97,0%**
Autonomo	**3,0%**

Tipologia di contratto (dipendenti)

Tempo indeterminato	**55,1%**
Tempo determinato	**16,6%**
Apprendistato	**24,6%**
Stage	**2,2%**
Altro	**1,5%**

Dimensione azienda (nr. addetti)

1 - 49	**15,2%**
50 - 499	**29,5%**
> 500	**55,3%**

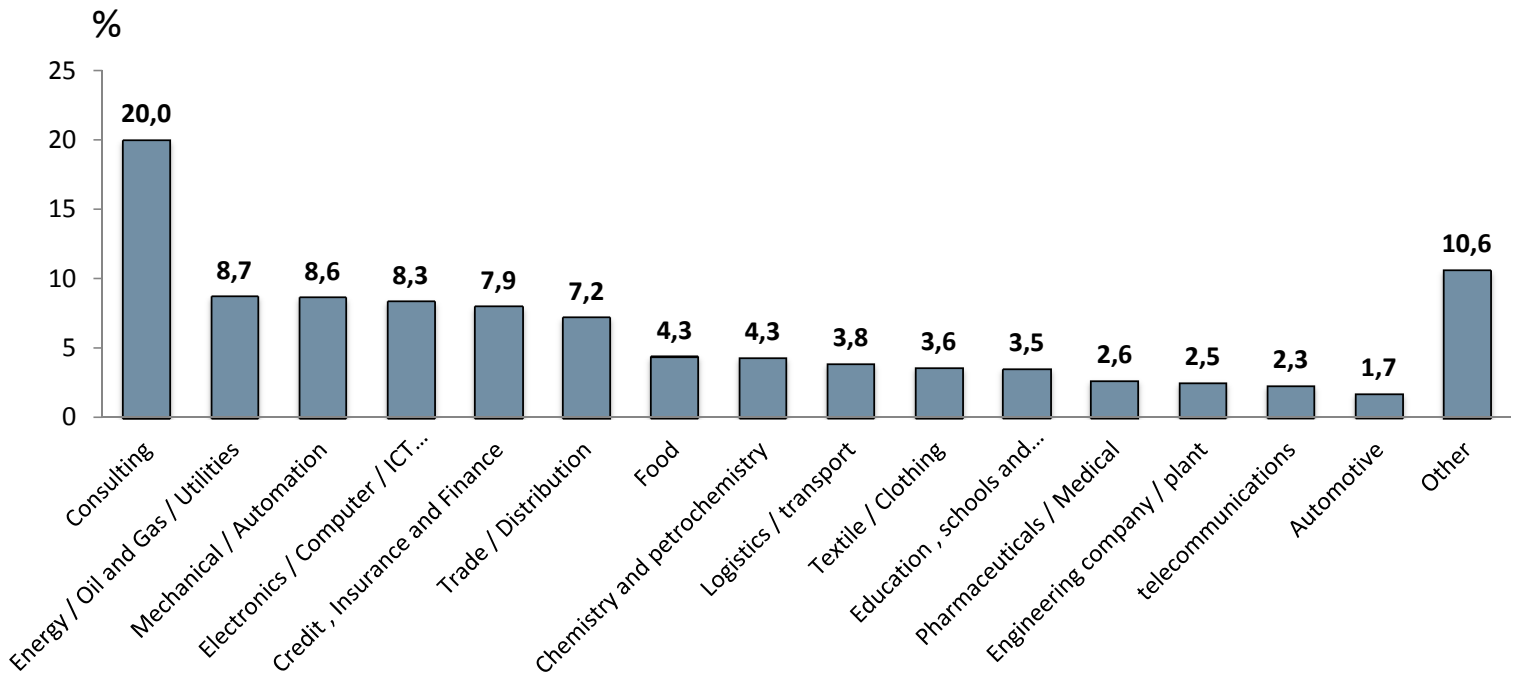
Come hanno trovato lavoro

Enti di intermediazione	**3,9%**
CareerService	**48,4%**
Stage di iniziativa personale	**9,6%**
Contatti diretti / iniziativa personale	**38,1%**

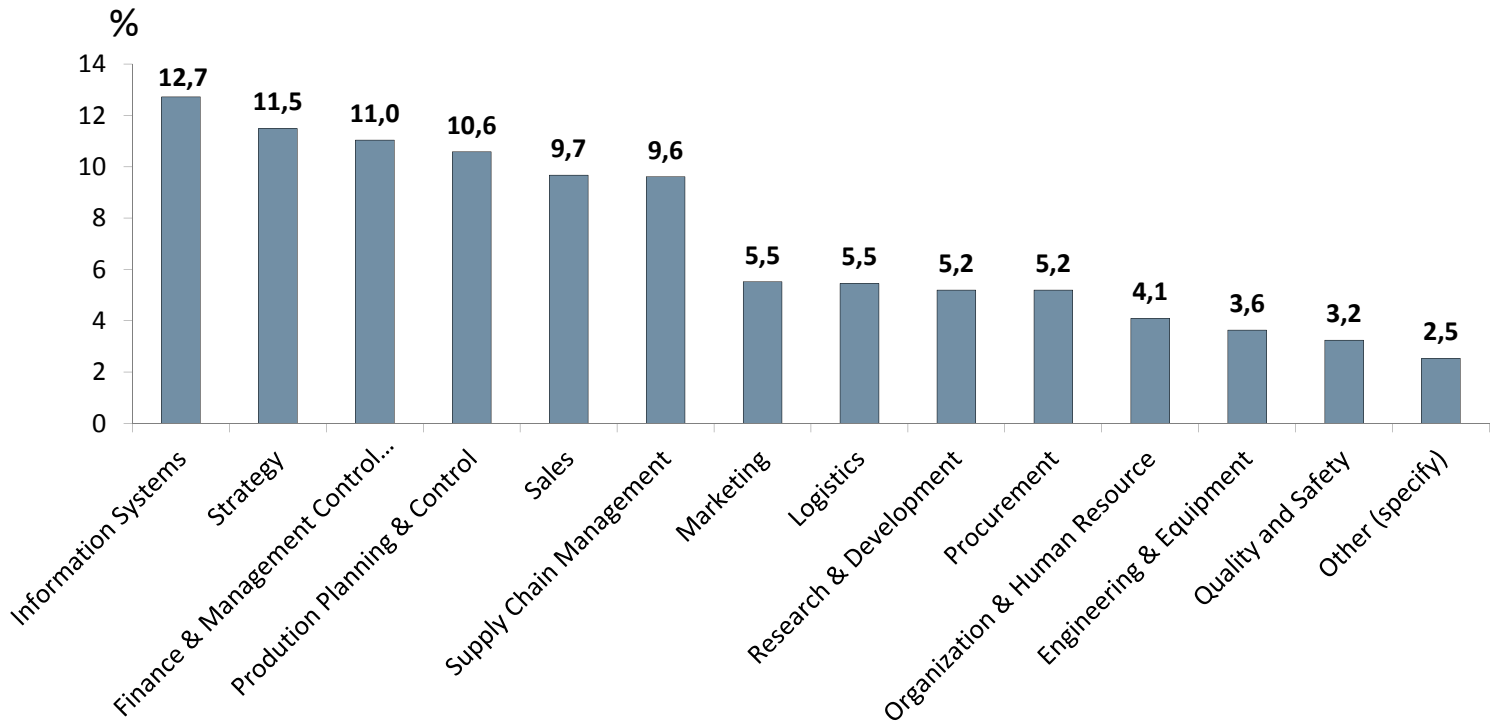
Ha svolto attività di tirocinio

Sì, durante gli studi universitari	**43,1%**
Sì, dopo il conseguimento del titolo	**32,7%**
No	**24,2%**

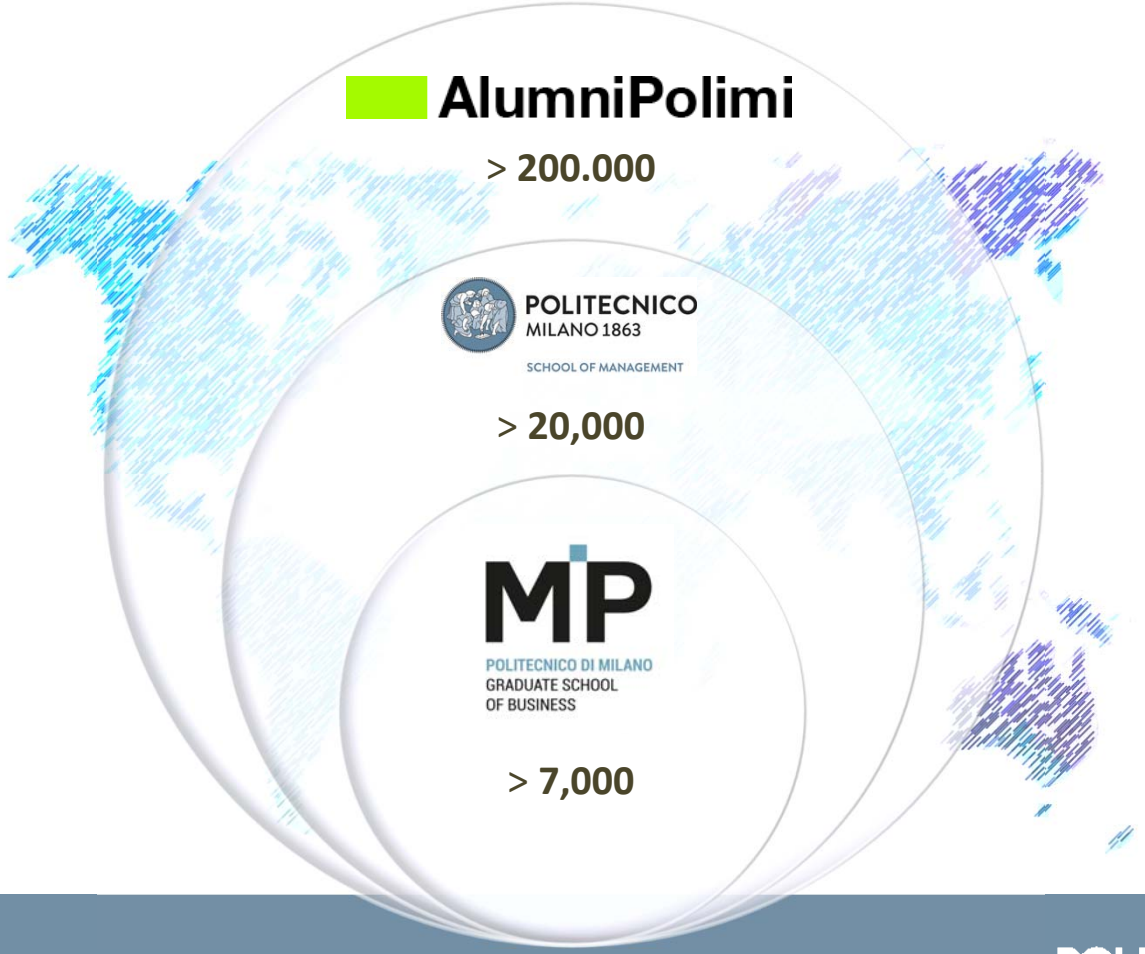
Main employers



Main jobs


%
14
12
10
8
6
4
2
0
12,7
11,5
11,0
10,6
9,7
9,6
5,5
5,5
5,2
5,2
4,1
3,6
3,2
2,5
Information Systems
Strategy
Finance & Management Control...
Prodution Planning & Control
Sales
Supply Chain Management
Marketing
Logistics
Research & Development
Procurement
Organization & Human Resource
Engineering & Equipment
Quality and Safety
Other (specify)

ALUMNI School of Management Community
Who we are



After your Graduation you can also join the Alumni Polimi Association with more than 40.000 active members!

Participate and be part of our community

- Provide us **constructive feed-backs** about our courses / initiatives (e.g. fill in the quality questionnaire at the end of the course, which is anonymous; provide comments and suggestions about how we can improve; be professional and not arrogant)
- Provide us **suggestions about initiatives** that can be implemented or share initiatives that could be of your interest you are aware about (e.g. conferences, summer schools)
- **Participate in the campus life** through the channels that are already available …

STUDENT REPRESENTATIVE COUNCIL

HSA
Hub of Student Activities

Facebook:
https://it-it.facebook.com/GestionaleRisponde/

#BeCurious

#BeProtagonist

#KeepinTouch

HSA

Hub of Student Activities

Aimed at creating a dynamic university life in Management Engineering, the HSA works as a hub for all the extracurricular activities in which the students can take part. The hub works in three ways: (1) it organizes and proposes local events under four groups of interests: social, cultural, didactic, recreational; (2) it serves as a platform to let each student propose its own club; (3) it promotes and communicates initiatives organized by other institutions of the university.

Associations

Annex

MS in Management Engineering: Detail of the streams

MSc in Management Engineering overall structure

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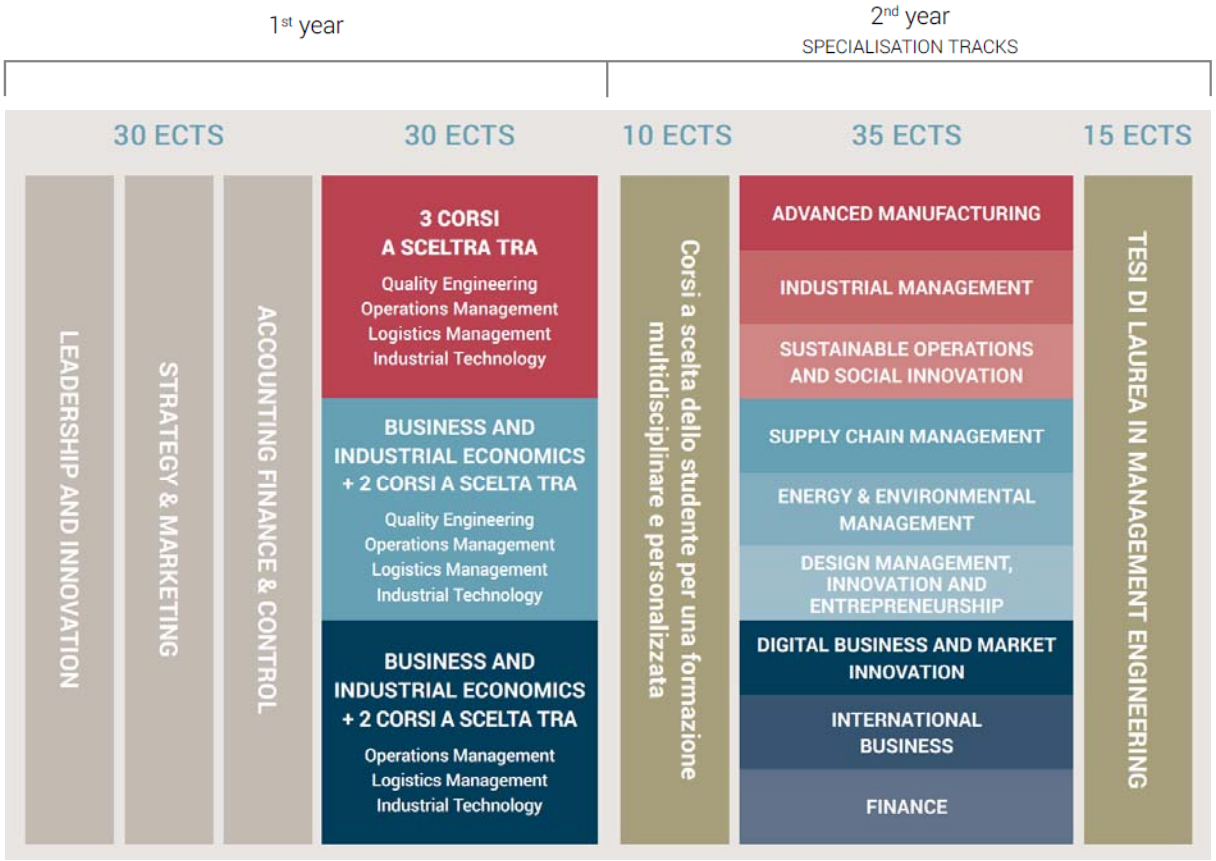

Second year is dedicated to developing vertical competencies within specific streams

Every stream ends with a practice-based lab

Advanced Manufacturing

Scenario and Market Needs

- **Europe and Italy are leaders** in different industrial and consumer sectors
- Manufacturing is in the **agendas of most countries** around the planet (investments in the next few years to boost manufacturing activities: 200M$ in USA, 140M£ in UK, 1.200M€ in Europe)
- Europe must keep most strategic, advanced and **value added manufacturing processes**

Intended Learning Outcomes

- Be able to **rethink products, processes and production systems** to remain competitive
- Understand **new technologies**, new materials and man-plant synergies
- Generate **new solutions** combining technological and organizational aspects

Jobs

- Employed mostly in manufacturing companies: new product and process design, manufacturing strategies, manufacturing system designer, quality manager, consultant in industrial engineering …

Contact Details

- Prof. Marco Macchi: marco.macchi@polimi.it
- Prof. Tullio Tolio: tullio.tolio@polimi.it

Advanced Manufacturing:
2nd year curriculum

Courses	Sem	ECTS	ECTS	SSD
Production for Made in Italy Lab	2	10	10	*16*
Manufacturing Systems Engineering	1	10	10	*16*
Asset Life Cycle Management	1	10	10	*17*
Additive Manufacturing	1	5	5	*16*
De-Manufacturing	1	5		*16*
Safety Engineering and Management	1	5		*17*
International Distribution	2	5		*17*
Management of Design and Innovation Projects	2	5		*35*

Free FREELM	1-2	10-14	14	-
Final Project (Thesis)	1-2	15	15	-

Industrial Management

Scenario and Market Needs

- Designing and running manufacturing and service businesses is more complex than in the past:
  - **Globalisation** of markets and production
  - **Customisation** of products and services
  - Faster **Technology** development
  - Competition for **critical resources**
  - Higher **competence level** for all workers

Intended Learning Outcomes

- Be able to build sustainable competitive advantage through **innovative production and service operations models** through a systems-thinking approach
- Run **company sites** in an effective and efficient way
- **Set up new sites and new initiatives** for the company's competitive advantage in the long run
- **Define operating processes**, direct investment in new technologies, develop competences and assets

Jobs

- Employed mostly in consulting and manufacturing companies: investments decisions, large industrial projects, manufacturing process design and management, operations improvement, asset life cycle management, plant management …

Contact Details

- Prof. Alberto Portioli: alberto.portioli@polimi.it

Industrial Management:
2nd year curriculum

Courses	Sem	ECTS	ECTS	SSD
Industrial Management Lab and toolbox	1-2	15	15	*17*
Asset Lifecycle Management	1	10	10	*17*
Industrial Project Management A	1	10		*17*
Operations Risk Management and Resilience	1	5	5	*17*
Quality Management	1	5		*17*
Additive Manufacturing	1	5	5	*16*
De-Manufacturing	1	5		*16*
Safety Engineering and Management	1	5		*17*
International Distribution	2	5		*17*
Digital Business Innovation	2	5		*17+35*
Product Lifecycle Management	2	5		*17*
Purchasing and Supply Chain Management	1	5		*17+35*

Free FREELM	1-2	10-14	14	-
Final Project (Thesis)	1-2	15	15	-

Sustainable Operations Management and Social Innovation

Scenario and Market Needs

- **Sustainability** is a key challenge for the future
- Social and Environment sustainability is in the **agendas of most countries** around the planet (investments by 2020: 1 trillion$ in the world)
- All organizations around the world will face more and more the need to **redesign their process to pursue sustainability**

Intended Learning Outcomes

- Understand how **"societal challenges"** are changing the way companies operate
- Analayze **new business models**, partnerships and technologies required by these challenges
- Implement appropriate **product and service design**, manufacturing and logistics approaches
- Map the trade-off bewteen **economic, social and environmental performances**

Jobs

- Employed mostly in multinationals, consulting and financial companies, NGOs and international institutions: sustainability department, strategy, manufacturing process design and management, product life cycle management, innovation and development …

Contact Details

- Prof. Mario Calderini: mario.calderini@polimi.it
- Prof. Marco Taisch: marco.taisch@polimi.it

Sustainable Operations Management and Social Innovation: 2nd year curriculum

Courses	Sem	ECTS	ECTS	SSD
Business in Transformation: Social and Sustainability Challenges Lab	1	15	15	*17+35+SPS/04*
Advanced and Sustainable manufacturing	1	10	10	*17*
Social Innovation	1	5	5	*35*
Health Care Management	2	5	5	*35*
De-Manufacturing	1	5		*16*
Economics of Netowork Industries	2	5		*35*
International Distribution	2	5		*17*
Operations Risk Management and Resilience	1	5		*17*
Policy Analysis	2	5		*Policy*
Free GESLM	1-2	5	5	-
Free FREELM	1-2	5-8	8	-
Final Project (Thesis)	1-2	15	15	-

Supply Chain Management

Scenario and Market Needs

- Competition is not among companies anymore but among **supply networks**
- Companies are acting on a **global scale**
- Suppliers upstream participate in the **80% of the overall value** delivered to customers
- Customers and distribution networks are more and more **complex and demanding**

Intended Learning Outcomes

- Understand **typical trade-offs** within a complex supply chain
- Implement **methods and ICT approaches** to solve supply-chain critical issues
- Measure and control **supply chain processes**
- Analyze and manage supply chains for different types of **markets and products**

Jobs

- Employed mostly in manufacturing, service and consulting companies: supply chain management, demand and supply planning, procurement, global sourcing, logistics and distribution, operations planning and control …

Contact Details

- Prof. Andrea Sianesi andrea.sianesi@polimi.it

Supply Chain Management:
2nd year curriculum

Courses	Sem	ECTS	ECTS	SSD
Supplier Relationship Management Lab	2	10	10	*35*
Advanced Supply Chain Planning Lab	2	10	10	*17*
Supply Chain Management	1	10	10	*17+35*
Digital Business Innovation	2	5	5	*17+35*
Operations Risk Management and Resilience	1	5		*17*
Quality Management	1	5		*17*
International Distribution	2	5		*17*

Free FREELM	1-2	10-14	14	-
Final Project (Thesis)	1-2	15	15	-

Energy and Environmental Management + Energy

Scenario and Market Needs

- Energy Management is increasingly assuming a **pivotal role**
- "Big bang disruption" of **renewables and shale gas&oil technologies**
- Sustainability of critical resources, with **reduced impacts on the environment**, is increasingly becoming a must
- The European Commission estimates that the impact of the "Package 20-20-20" would create 2 more **million of "green employees"**

Intended Learning Outcomes

- Understand **global energy and environment** scenarios
- Understand competition dynamics and **design new business models**, including Energy Service Companies (ESCos), e-mobility, smart cities and eco-industrial parks
- Evaluate **incentive mechanisms and policies**
- Design solutions for **energy and resource efficiency**
- Implement **strategic and technical improvements**

Jobs

- Employed mostly in energy companies, consulting, financial institutions and regulatory authorities: general management, business development, analysts, energy management, …

Contact Details

- Prof. Vittorio Chiesa: vittorio.chiesa@polimi.it
- Prof. Paolo Trucco: paolo.trucco@polimi.it

Energy and Environmental Management: 2nd year curriculum

Courses	Sem	ECTS	ECTS	SSD
Energy Management Lab	2	10	10	*17+35*
Management of Energy and Sustainability	1	10	10	*35*
Economics of Network Industries	2	5	5	*35*
Industrial Eco-efficiency	1	5	5	*17*
Fundamentals of Energy Technologies	1	5	5	*Energy*
Diritto dell'Energia	2	5	5	*Law*
Financial Risk Management	2	5		*35*
Industrial Project Management B	2	5		*17*
Power Production from Renewable Energy C	1	5		*Energy*
Operations Risk Management and Resilience	1	5		*17*
Social Innovation	1	5		*35*
Free FREELM	1-2	5-8	8	-
Final Project (Thesis)	1-2	15	15	-

Design Management, Innovation and Entrepreneurship

Scenario and Market Needs

- **New products and services** are key engines of competitiveness, growth, and long-term sustainability
- Innovation comes from a variety of **different sources** within and outside the company
- Effective innovation requires people with **entrepreneurial orientation** and collaborative attitude
- **Development processes**, for rapidly testing and implementing ideas, reaching global markets

Intended Learning Outcomes

- Search for new opportunities and find **creative solutions**
- **Engage others** (internal teams and external partners)
- Operate in creative contexts, **get creativity into business**
- Master the new product and service innovation through the entire **product life cycle**
- Adopt a **multi-disciplinary approach**: Design Management, Innovation Management, Entrepreneurship, Product service development

Jobs

- Employed mostly in manufacturing, service companies and start-ups: Innovation Manager, Entrepreneurs, Strategy, Marketing, R&D, New Business Development, Design, Product Management …

Contact Details

- Prof. Massimo Colombo: massimo.colombo@polimi.it
- Prof. Roberto Verganti: roberto.verganti@polimi.it

Design Management, Innovation and Entrepreneurship: 2nd year curriculum

Courses	Sem	ECTS	ECTS	SSD
Design Management Lab	1	15	15	*Icar13+35*
Design Strategy and Economics of Innovation	1	10	10	*35*
Additive Manufacturing	1	5	10	*16*
Management of Design and Innovation Projects	2	5		*35*
Digital Business Innovation	2	5		*17 + 35*
Entrepreneurship Economics and policy	2	5		*35*
Product Life Cycle Management	2	5		*17*
Branding and Communication	2	5		*Design*

Free GESLM	1-2	10-13	13	-
Final Project (Thesis)	1-2	15	15	-

Digital Business and Market Innovation

Scenario and Market Needs

- Information & Communication Technologies (**Digital Technologies - DTs**) are becoming more and more pervasive and disruptive
- DT are driving **significant changes** and innovations in many markets
- DT are changing the way to **manage data** from all sources, enhancing decision-making
- All organizations need **individuals** able to exploit DT-driven business innovation

Intended Learning Outcomes

- Effectively interpret all the **current trends and future scenarios** regarding DT
- Play an **active and driving role** in digital innovations
- Understand how to **take advantage of the infinite data** and information available in the digital realm
- Identify the **business opportunities** brought on by DTs to create innovative startups

Jobs

- Employed mostly in consulting, service companies and start-ups: Information Technology, Marketing, Innovation Manager, Data Scientist, Strategy, New Business Development, …

Contact Details

- Prof. Raffaello Balocco: raffaello.balocco@polimi.it
- Prof. Giuliano Noci: giuliano.noci@polimi.it

Digital Business and Market Innovation:
2nd year curriculum

Courses	Sem	ECTS	ECTS	SSD
Designing Digital Business Innovation Lab	2	15	15	*17+35*
Multichannel Customer Strategy	1	10	10	*35*
Applied Statistics	1	5	5	*Statistics*
Machine Learning	1	5		*Informatics*
Digital Technology	2	5		*Informatics*
Additive Manufacturing	1	5	5	*16*
Branding and Communication	2	5		*Design*
Public Management	1	5		*35*
Social Innovation	1	5		*35*
Purchasing and Supply Chain Management	1	5		*17+35*

Free GESLM	1-2	5	5	-
Free FREELM	1-2	5-8	8	-
Final Project (Thesis)	1-2	15	15	-

Finance

Scenario and Market Needs

- After the **financial crisis** has hit many countries, reverting to a positive and constructive role is crucial for Finance today
- The Finance of the future needs to be **closer to the real economy** and to enterprises
- Financial markets have become **more and more complex** in terms of actors, tools, regulations and global interactions

Intended Learning Outcomes

- Knowledge of **financial markets** and their structure
- Knowledge of the main **financial intermediaries**
- Knowledge of the **finance unit** in large firms
- Knowledge of main **risk categories**, both financial and non-financial
- Knowledge of financing methods available to firms to **raise financial resources** during their life cycle
- Knowledge of the **main financial instruments** (e.g. derivatives, supports to internationalization)

Jobs

- Employed mostly in financial companies, consulting, service and manufacturing companies: Asset & Investment Management, Corporate Finance, Investment & Commercial Banking, Risk Management, Accounting & Finance…

Contact Details

- Prof. Marco Giorgino: marco.giorgino@polimi.it
- Prof. Giancarlo Giudici: giancarlo.giudici@polimi.it

Finance:
2nd year curriculum

Courses	Sem	ECTS	ECTS	SSD
Finance Lab + Corporate Finance	A	15	15	*35*
Financial Markets and Institutions + Macroeconomics of Finance	1	10	10	*35+Economics*
Financial Econometrics	2	5	5	*Economics*
Entrepreneurial Finance	1	5		*35*
Financial Risk Management	2	5		*35*
Investment Banking	1	5		*35*
Financial Econometrics	2	5	5	*Economics*
Entrepreneurial Finance	1	5		*35*
Entrepreneurship Economics and Policy	2	5		*35*
Financial Risk Management	2	5		*35*
Investment Banking	1	5		*35*
Operations Risk Management and Resilience	1	5		*17*
Free GESLM	1-2	5	5	-
Free FREELM	1-2	5-8	8	-
Final Project (Thesis)	1-2	15	15	-

International Business

Scenario and Market Needs

- The international fragmentation of production systems and the **geographical dispersion** of the value chain have opened up new scenarios and opportunities
- This requires a comprehensive understanding of the **international business environment** (policies, regulations …)
- Appropriate frameworks and methodologies are needed to compete in this global economy and understand the **interaction between firms' strategies, institutions and policies**

Intended Learning Outcomes

- Acquire a **holistic view of the international business environment**, and how policies and regulations affect industries and firms
- Develop **analytical and pragmatic business capabilities**
- Develop **cross-cultural** interpersonal skills
- Be able to **connect the 'micro' firm view with the 'macro' view** of countries and regions
- Understand the **interaction between firms' strategies, economic and development policies, and the changing global environment**

Jobs

- Employed mostly in multinational companies, consulting and institutional organizations: foreign markets relationships, business development, export management, global sourcing …

Contact Details

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International Business:
2nd year curriculum

Courses	Sem	ECTS	ECTS	SSD
Investments in Foreign Markets Lab	2	15	15	*17+35*
International Economics	1	10	10	*Economics*
Economics and Management of Multinational Enterprises	1	5	5	*35*
International Markets and European Institutions	1	5		*Economics*
Economics and Management of Multinational Enterprises	1	5	5	*35*
Global Supply Chains and Networks	1	5		*17+35*
International Distribution	2	5		*17*
International Markets and European Institutions	1	5		*Economics*

Free GESLM	1-2	10-13	13	-
Final Project (Thesis)	1-2	15	15	-

POLITECNICO
MILANO 1863

Deploy our values

Integrity and rules compliance

«Ideas» and civil commitment (Platone)

Autonomy in problem solving

Your «Reason for Existence» to create value (Aristotele)

Critical and deep analysis

«Know to not Know» (Socrate)

Logic and clear reasoning

Rigor and clarity in the «Elements» (Euclide)