



POLITECNICO
MILANO 1863

SCUOLA DI INGEGNERIA INDUSTRIALE
E DELL'INFORMAZIONE

MSc in Management Engineering

17.09.2021 | Stefano Ronchi

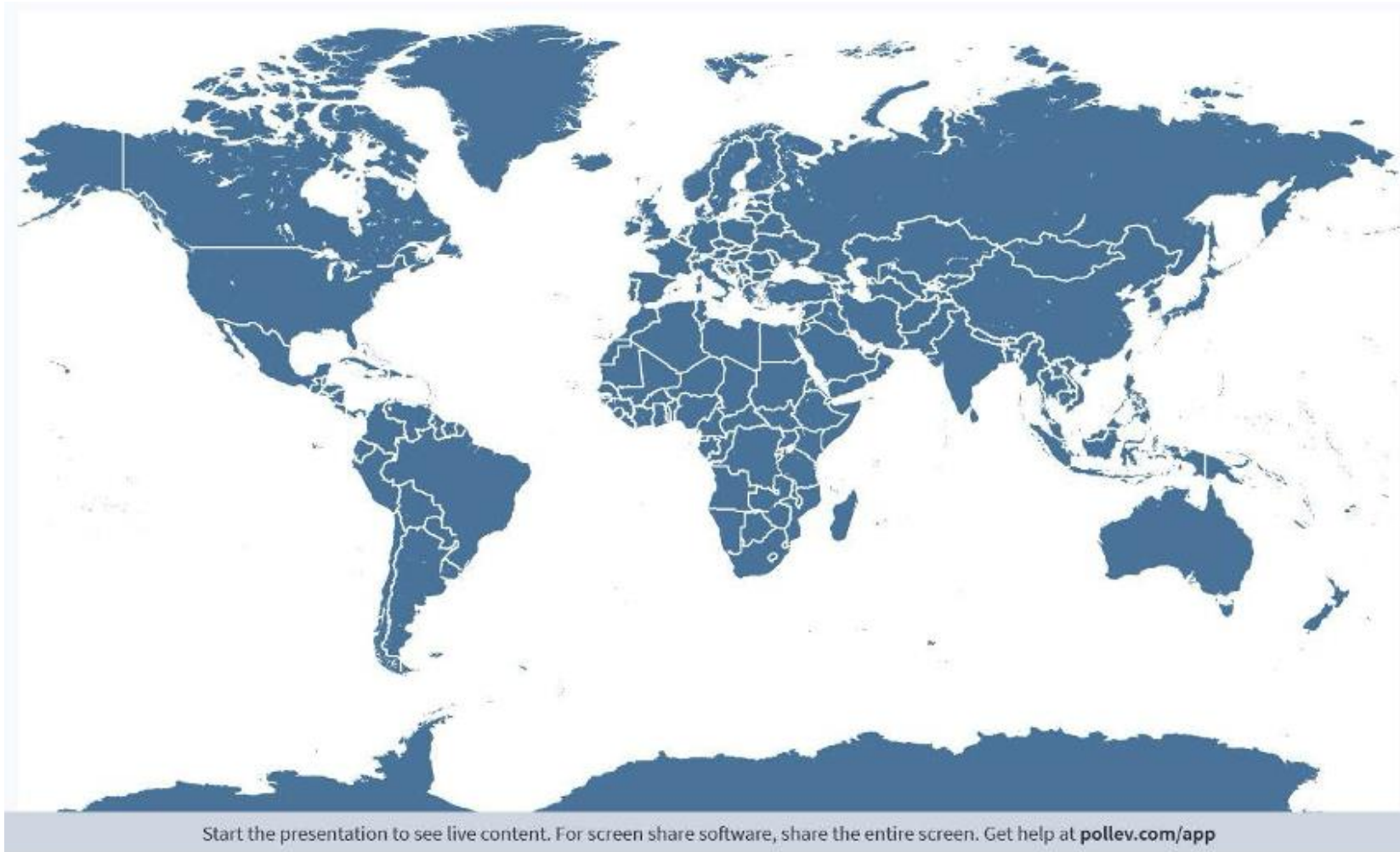
Where are you from?

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www.pollev.com/arenam



Where are you from?



Mission

«To be a “European Leading University”, capable of guiding research and scientific and technological innovation to improve human life in a sustainable and responsible way»



Over **1.500** professors and
1.200 administrative staff

Over **45.000**
students

12
Departments



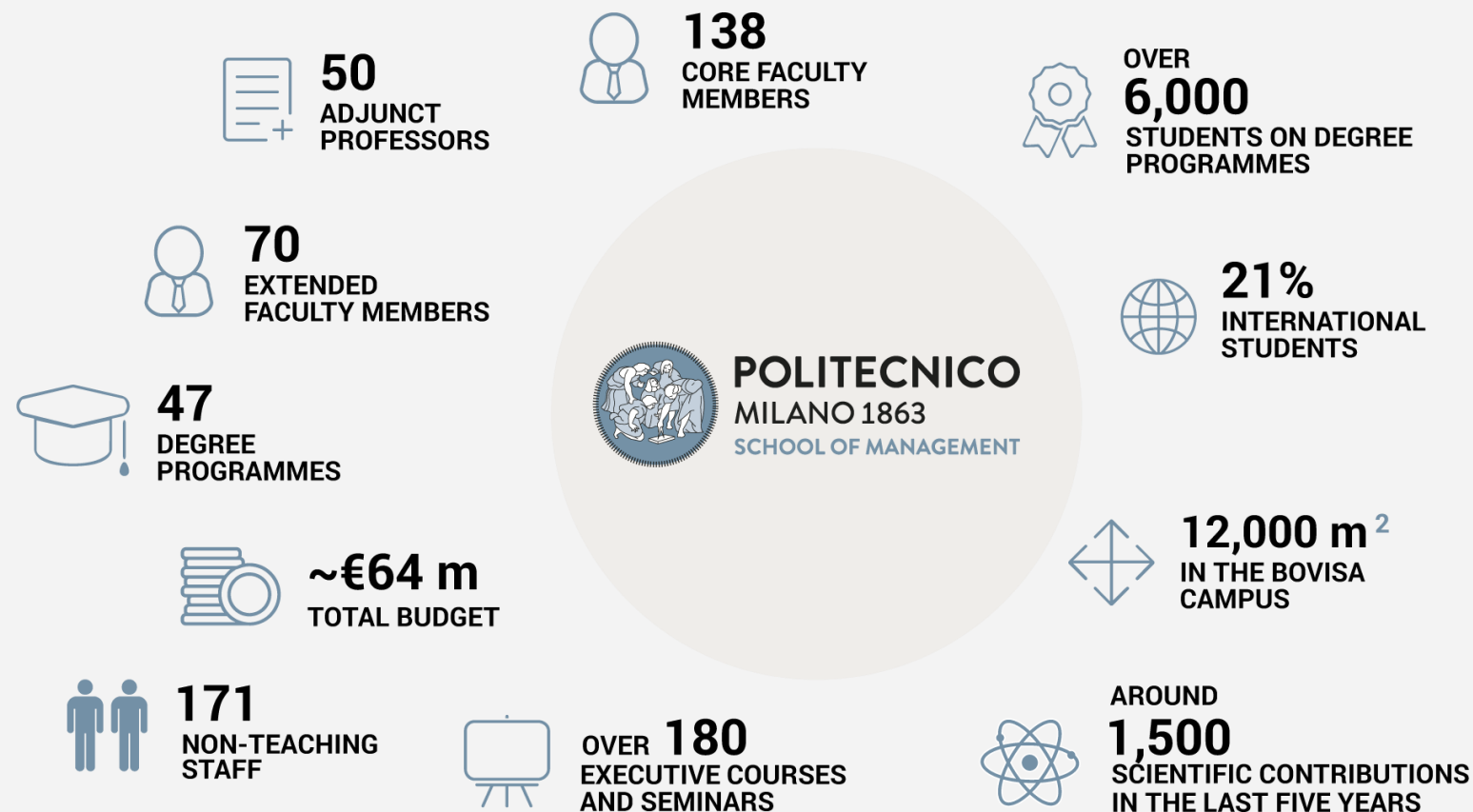
Schools of
**Architecture,
Design,
Engineering**

Ranked **1st in Italy,**
7th in Europe, 20th Worldwide

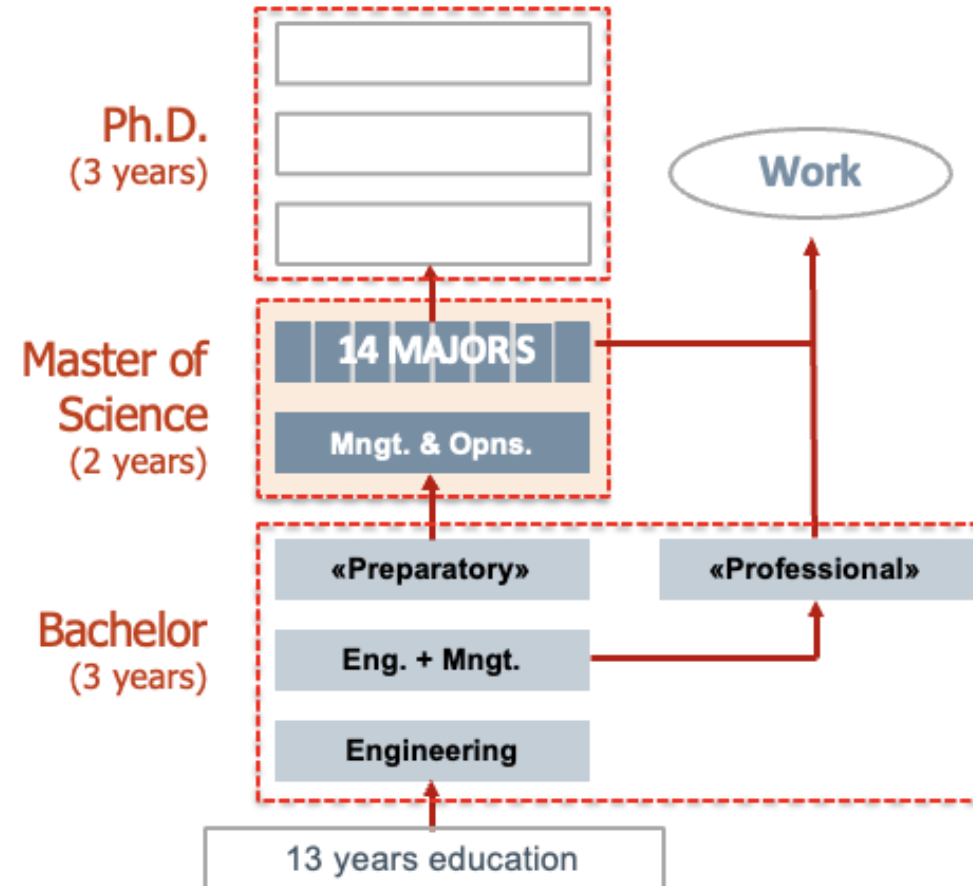
QS World University Ranking 2021-
Engineering & Technology

School of Management:

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



Management Engineering within the Italian Education context



Duration	2 years
Calendar	Sept/Dic – Feb/Jun
Course size	5-15 ECTS
Workload	120 ECTS
Enrolments (≈)	850

Notes:

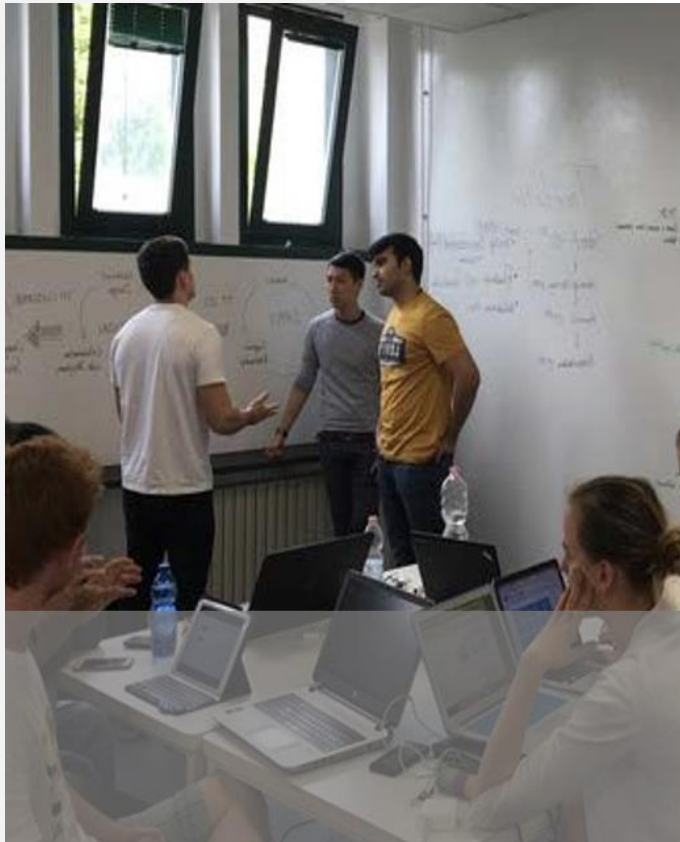
- Specific managerial competences based on a solid scientific and engineering background
- 15.000 graduates since the constitution in 1982
- Entirely taught in English
- Over 20% of International students
- Huge opportunities for experiences abroad through exchanges and double degree programs: over 25% of our students have experiences abroad
- Double degrees with other departments and other international universities

A number of different opportunities

- Access to one of the top universities worldwide
- A real international environment
- Campus and sport life (e.g. Hub of Student Activities - HSA)
- Deep-dive into concrete business problems (Labs): interaction with industry
- Double Degrees with other departments and other universities
- Opportunity to access our «Honours Programme»



Multimedia classrooms



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)
 - ETH Zurich (Svizzera)
 - INSA Lyon (Francia)
 - Loughborough University (Inghilterra)
 - RWTH Aachen University (Germania)
 - Trinity College (Irlanda)
 - Universitat Politecnica de Catalunya (Spagna)



A number of different opportunities

- **IDEA League:**

- Politecnico di Milano (Italia)
- ETH Zurich (Svizzera)
- TU Delft (Olanda)
- Chalmers University of Technology (Svezia)
- RWTH Aachen University (Germania)

- **Alliance4Tech:**

- Politecnico di Milano (Milano)
- Technische Universität Berlin (Berlino)
- CentraleSupélec (Parigi)
- University College London (Londra)



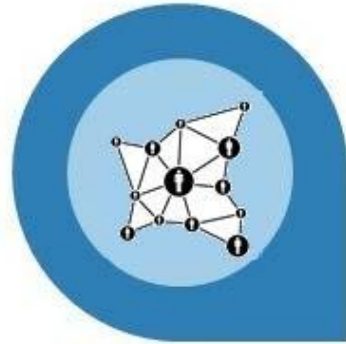
ALLIANCE  TECH



Mentorship programme: The four pillars

Networking

Participate and build a network of friendly people who share your interests



Senior Mentorship

Develop a one-on-one relationship with a top professional of our SOM



Civic Responsibility

Learn to participate and become an agent for change in your community



Active learning

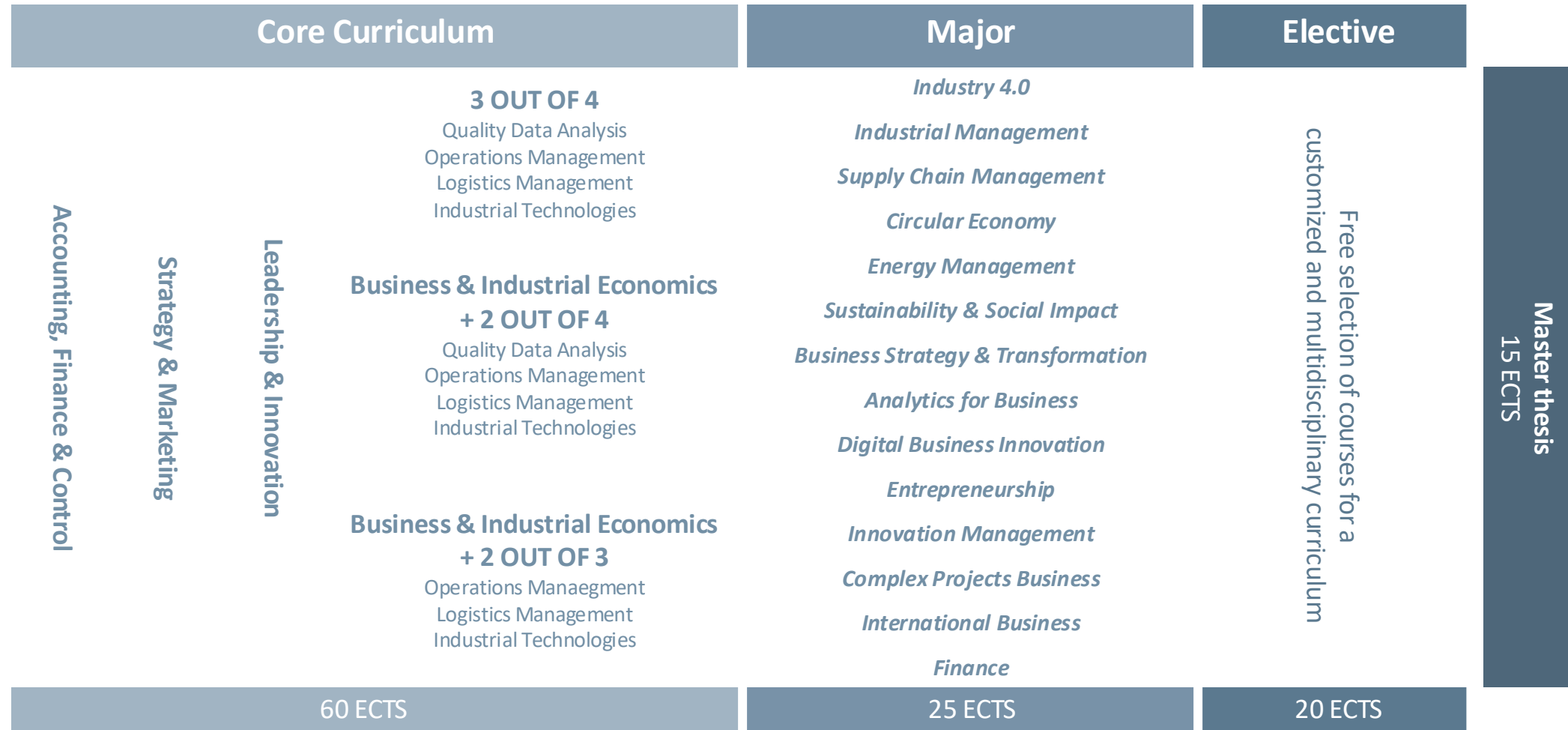
Experience how to teach bachelor students while growing skills to equip you for your career



Intended Learning outcomes: MASTER OF SCIENCE IN MANAGEMENT ENGINEERING

1. **Understand** challenges, functions, processes in a business and industrial environment and their mutual effects on business, economy, environment and society
2. **Identify** trends, technologies, key methodologies and stakeholder needs in a specific domain (specialization majors)
3. **Design** solutions applying a scientific and engineering approach (Analysis, Learning, Reasoning, and Modeling capability deriving from a solid and rigorous multidisciplinary background) coupled with participatory approaches to face problems and opportunities in a business, industrial and societal environment
4. **Develop** new ideas and transformative solutions to deliver positive impact on business, industrial and societal scenarios evolving over time
5. **Interact** in a professional, responsible, inclusive, effective and constructive way in a working environment, also motivating group members

MSc in Management Engineering overall structure



MAJOR: Industry 4.0



Contact Details

Prof. Marco Taisch: marco.taisch@polimi.it

Prof.ssa Bianca Maria Colosimo: biancamaria.colosimo@polimi.it

The Major Industry 4.0 aims to provide students with a set of advanced competences to understand and leverage the connections between manufacturing, management and digital technologies. Students will have the opportunity to learn how to deal with the 4th industrial revolution in terms of technologies, markets, management and business models.

Lab:	
• Smart Manufacturing Lab (ING-IND16/17)	10
• Digital Manufacturing (ING-IND17)	10
• Industrial Automation and Robotics (ING-INF/04)	
• Manufacturing Systems Engineering I (ING-IND16)	5
• Additive Manufacturing (ING-IND16)	
Total	25

MAJOR: Industrial Management



Contact Details

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

The Major Industrial Management aims to provide students with a systemic and integrated view of the industrial processes of a service or manufacturing company, including the relationships with customers and suppliers. Students will learn how to deal with production, planning, purchasing, quality, logistics etc. in order to create and maintain competitive advantage.

Lab:	
• Industrial Management Lab and Toolbox (ING-IND17)	15
• Smart Maintenance Management (ING-IND17)	
• Operations Risk Management and Resilience (ING-IND17)	5
• Industrial Asset Management (ING-IND17)	
• Agile Project Management (ING-IND17)	5
• Quality Management (ING-IND17)	
Total	25

MAJOR: Supply Chain Management



Contact Details

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

Prof. Federico Caniato: federico.caniato@polimi.it

The Major Supply Chain Management aims to provide students with the set of advanced competences and skills required to manage global supply chains, from the definition of the strategy to its execution, through the processes of plan, source, make, and deliver. Students will learn how to manage sustainability, innovation and finance from a supply

• Advanced Supply Chain Planning Lab (ING-IND/17)	10
• Supplier Relationship Management Lab (ING-IND/35)	
• Supply Chain Management (ING-IND/17-35)	5
• Purchasing and Supply Management (ING-IND/35)	10
• Global Supply Chain Planning (ING-IND/17)	
• International Distribution (ING-IND/17)	
• Supply Chain Innovation (ING-IND/17)	
• Global Supply Chains and Networks (ING-IND/35)	
• Green Logistics (ING-IND/17)	
Total	25

MAJOR: Circular Economy



Contact Details

Prof. Paolo Trucco: paolo.trucco@polimi.it

Prof. Davide Chiaroni: davide.chiaroni@polimi.it

The Major Circular Economy aims at introducing students to circularity as a strategic framework to induce a transition towards sustainable production and consumption in the context of climate change mitigation strategies. Students will learn how to model, analyse, restructure and develop new industrial systems leveraging on circular economy strategies.

Lab:	
• Circular Economy Lab (ING-IND/ 17 e 35)	10
• Circular Industrial Systems (ING-IND/17)	15
• Circular Economy Business Models (ING-IND/35)	
• Sustainable Manufacturing (ING-IND/17)	
• Green Logistics (ING-IND/17)	
Total	
	25

MAJOR: Energy Management



Contact Details

Prof. Vittorio Chiesa: vittorio.chiesa@polimi.it

Prof. Paolo Trucco: paolo.trucco@polimi.it

The Major Energy Management aims to provide students a systemic view of the profound transformation of the global energy sector, in the transition from fossil-based to zero-carbon. Students will learn how to deal with current trends and future scenarios in energy production and consumption, and their implications for the long-term competitiveness of companies.

Lab:	
• Energy Management Lab (ING-IND/ 17 e 35)	10
• Management of Energy (ING-IND/35)	5
• Fundamentals of Energy Technologies (ING-IND/10)	10
• Circular Economy Business Models (ING-IND/35)	
• Technology Risk Governance (ING-IND17)	
• Strategic Innovation (ING-IND/35)	
• Diritto dell'Energia (IUS/10)	
Total	
25	

MAJOR: Sustainability and Social Impact



Contact Details

Prof. Raffaella Cagliano: raffaella.cagliano@polimi.it

Prof. Mario Calderini: mario.calderini@polimi.it

The Major Sustainability and Social Impact aims to get students acquainted with the societal challenges, the new economic paradigms and the technological breakthroughs that are giving rise to the purpose-driven economy. Students will learn how to develop and implement managerial and innovation models, strategies, finance and investing solutions for purpose, sustainability and impact.

Lab:	
• Sustainable and Social Innovation Lab (ING-IND/35)	10
• Management for Sustainability and Impact (ING- IND/35)	10
• Collaborative Innovation for Sustainability and Impact (ING-IND/35)	
• Sustainable Manufacturing (ING-IND/17)	5
• Innovation in Health and Social Care (ING-IND/35)	
• Policy Design and Evaluation (SPS/04)	
• Global Environmental Challenges (ING-IND/35)	
Total	
25	

MAJOR: Business Strategy & Transformation



Contact Details

Prof. Tommaso Buganza: tommaso.buganza@polimi.it

Prof. Federico Frattini: federico.frattini@polimi.it

The Major Business Strategy and Transformation aims to provide students the required competences and tools to deal with corporate and business transformations portraying strategic innovation and organizational change. Students will learn how to address these complex processes, through a design mindset that enacts sense making through problem solving.

Lab:	
• Business Design and Transformation Lab (ING-IND/35 e ICAR/13)	10
• Strategic Innovation (ING-IND/35)	5
• Agile Innovation (ING-IND/35)	10
• Corporate Finance (ING-IND/35)	
• Design Thinking for Business (ING-IND/35)	
• Digital Business (ING-IND/17)	
• New Forms of Organization (ING-IND/35)	
Total	25

MAJOR: Analytics for Business



Contact Details

Prof. Michela Arnaboldi: michela.arnaboldi@polimi.it

Prof. Giuliano Noci: giuliano.noci@polimi.it

The Major Analytics for Business approaches general management with an enhanced data-powered and market-oriented perspective. Students will learn how to analyze data through the proper tools and models, detect, organize and communicate indicators and dashboards for decision support, and turn the information into a solid, accountable, value-driven business strategy.

Lab:	
• Analytics for Business Lab (ING-IND35 e SECS-S01)	10
• Applied Statistics (SECS-S01)	15
• Marketing Analytics (ING-IND35)	
• Advanced Performance Measurement (ING-IND35)	
Total	25

MAJOR: Digital Business Innovation



Contact Details

Prof. Andrea Rangone: andrea.rangone@polimi.it

Prof. Mariano Corso: mariano.corso@polimi.it

Prof. Riccardo Mangiaracina:
riccardo.mangiaracina@polimi.it

The Major Digital Business Innovation aims to provide students with a comprehensive and critical understanding of the business impact of Digital Technologies, from the strategic, entrepreneurial and organizational perspectives. Students will learn how to interpret current trends and future scenarios regarding Digital Technologies and identify and leverage on the related business opportunities.

Lab:	
• Digital Business Lab (ING-IND 35)	10
• Digital Business (ING-IND 17)	5
• Digital Manufacturing (ING-IND/17)	10
• New Forms of Organization (ING-IND/35)	
• Omnichannel Marketing Management (ING-IND/35)	
• Economics of Innovation and New Technologies (ING-IND/35)	
• Agile Innovation (ING-IND/35)	
• Machine Learning (INF/01)	
• Digital Technology (ING-INF/05)	
Total	25

MAJOR: Entrepreneurship



Contact Details

Prof. Massimo Colombo: massimo.colombo@polimi.it

Prof. Andrea Rangone: andrea.rangone@polimi.it

The Major Entrepreneurship aims to provide students with a comprehensive understanding of the challenges and success factors in launching a new business (i.e., a new venture, a new business unit within an existing corporations). Students will learn how to develop the business model of an entrepreneurial idea, and how to launch and manage a new business.

Lab:	
• Entrepreneurship Lab (ING-IND/35)	10
• Digital Business (ING-IND/17)	15
• Entrepreneurship Economics (ING-IND/35)	
• Entrepreneurial Finance (ING-IND/35)	
• Patents and Intellectual Property Management (ING- IND/35)	
• Family Business (ING-IND/35)	
• Design Thinking for Business (ING-IND/35)	
Total	25

MAJOR: Innovation Management



Contact Details

Prof. Massimo Colombo: massimo.colombo@polimi.it

The Major Innovation Management aims to provide students with the competences required to design, develop, test and implement innovation projects for seizing new business opportunities and facing emerging trends. Students will learn how to use skills of agile project management, Intellectual Property management, corporate finance, product lifecycle management needed to manage innovation.

Lab:	
• Innovation in Action Lab (ING-IND/35+17)	10
• Economics of Innovation and New Technologies (ING- IND/35)	5
• Agile Project Management (ING-IND/17)	10
• Patents and Intellectual Property Management (ING- IND/35)	
• Product Life Cycle Management (ING IND/17)	
• Corporate Finance (ING-IND/35)	
• Digital Business (ING-IND 17)	
• Design Thinking for Business (ING-IND/35)	
Total	25

MAJOR: Complex Projects Business



Contact Details

Prof. Paolo Trucco: paolo.trucco@polimi.it

The Major Complex Projects Business aims to introduce students to the Project Economy, developing a holistic background about the selection, planning and delivery of Complex projects. Students will learn how to deal with stakeholder involvement, cost and benefit evaluation, technology and operations-related decisions along the project lifecycle.

Lab:	
• Complex Projects Lab (ING-IND/17)	10
• Project Management (ING-IND/17)	5
• Financing Complex Projects (ING-IND/35)	10
• Knowledge Management in Infrastructure Projects (ICAR/11)	
• International Markets and European Institutions (SECS- P/02)	
• Industrial Asset Management (ING-IND/17)	
• Technology Risk Governance (ING-IND17)	
Total	25

MAJOR: International Business



Contact Details

Prof. Lucia Piscitello: lucia.piscitello@polimi.it

Prof. Lucia Tajoli: lucia.tajoli@polimi.it

The Major International Business aims to introduce students to the challenges related to globalization and international competition. Students will learn how to manage firms operating in the global market and understand the different internationalization processes of an enterprise within the international socio-economic and business environment.

Lab:	
• Invest in Foreign Markets Lab (ING-IND/35)	10
• International Economics (SECS-P/02) – C.I. 5+5	15
• Economics and Management of Multinational Enterprises (ING-IND/35)	
• International Markets and European Institutions (SECS- P/02)	
• Development Economics (ING-IND/35, SECS-P/01)	
Lab:	
• Invest in Foreign Markets Lab (ING-IND/35)	10
Total	
	25

MAJOR: Finance



Contact Details

Prof. Marco Giorgino: marco.giorgino@polimi.it

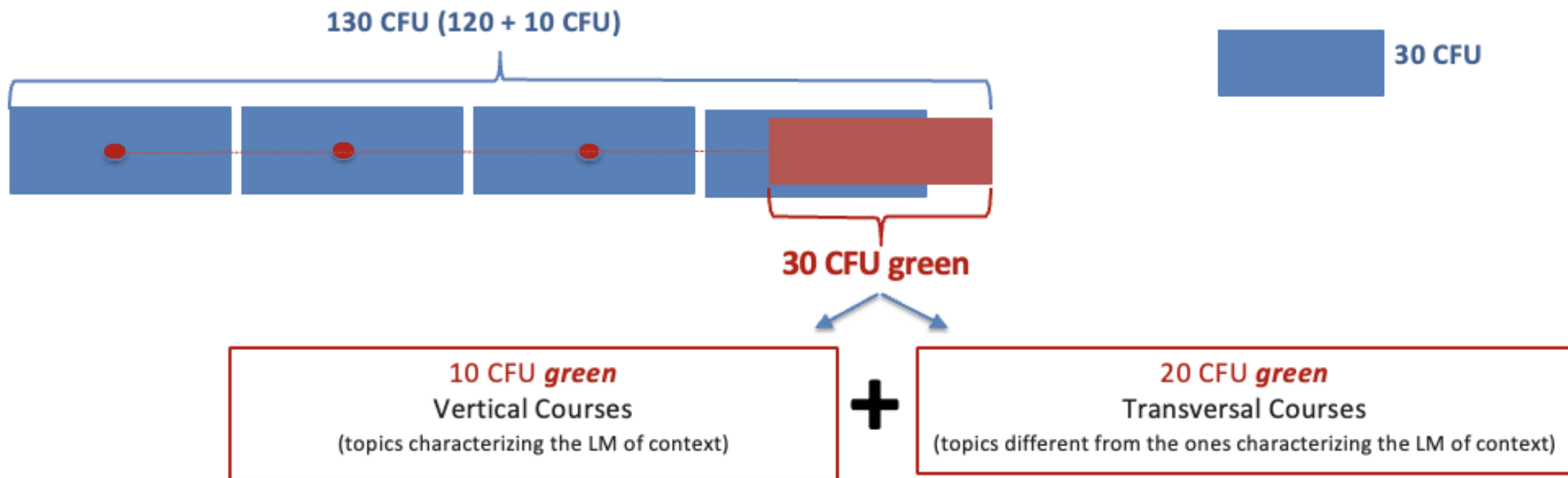
Prof. Giancarlo Giudici: giancarlo.giudici@polimi.it

The Major Finance will provide students with comprehensive understanding of the financial systems and the role of finance within industrial and financial corporations. Students will develop advanced knowledge about corporate financing practices and strategies, financial markets, institutions and intermediaries, financial securities and their evaluation tools, fintech and sustainable finance.

Lab: • Finance Lab (corso integrato 5 + 5 ING-IND/35)	10
• Corporate Finance (ING-IND/35) • Macroeconomics of Finance (SECS/P01) • Financial Markets & Institutions (ING-IND/35)	15
Lab: • Finance Lab (corso integrato 5 + 5 ING-IND/35)	10
Total	25

PoliMI Ambassador in Green Technologies

Starting with the 2021-2022 academic year, the professional profiles in **Green Technologies** will be active as part of the MSc in Management Engineering



The PoliMI Ambassador in **Green Technologies** certification will be reported in the Student's Diploma Supplement and an electronic badge will be issued by Politecnico di Milano.

Admissions

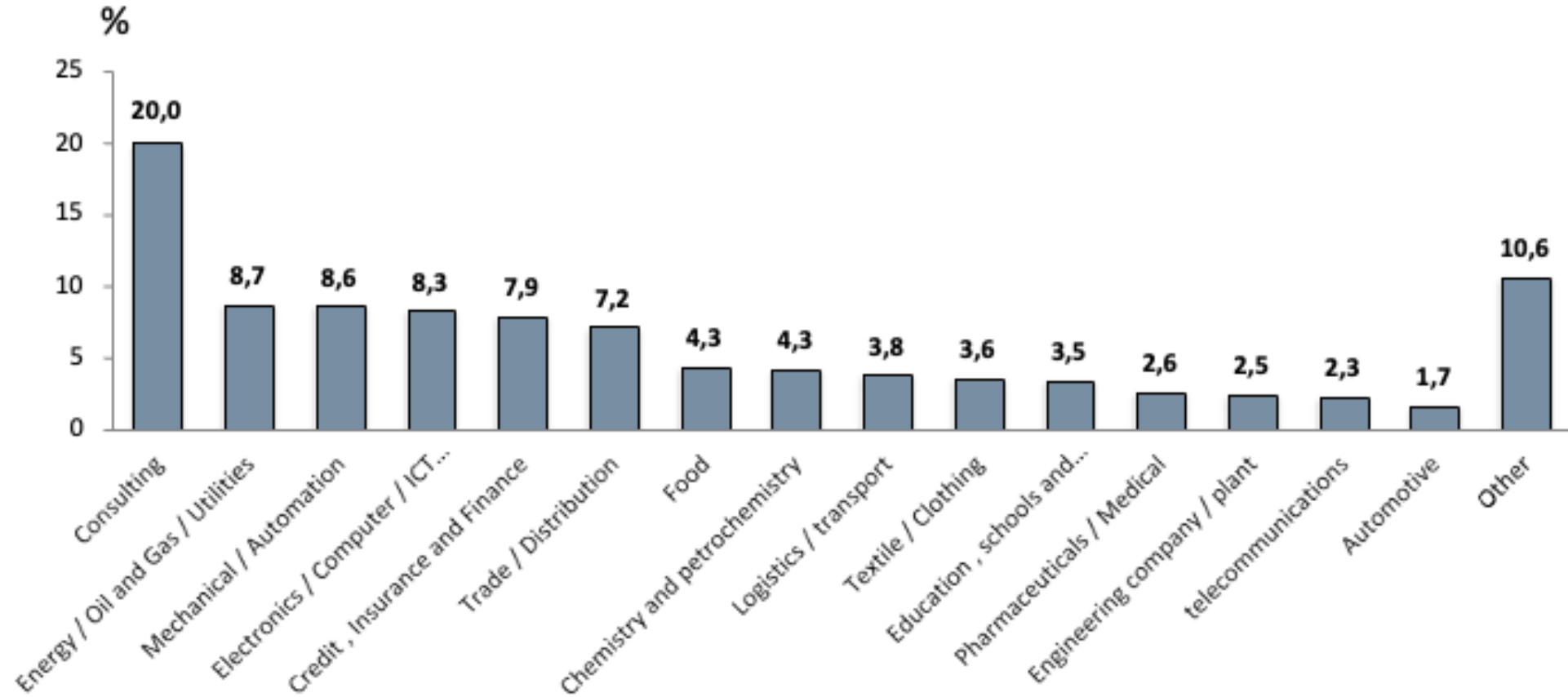
The application process is performed through the online system (servizi on line):

<https://www.polimi.it/en/international-prospective-students/>

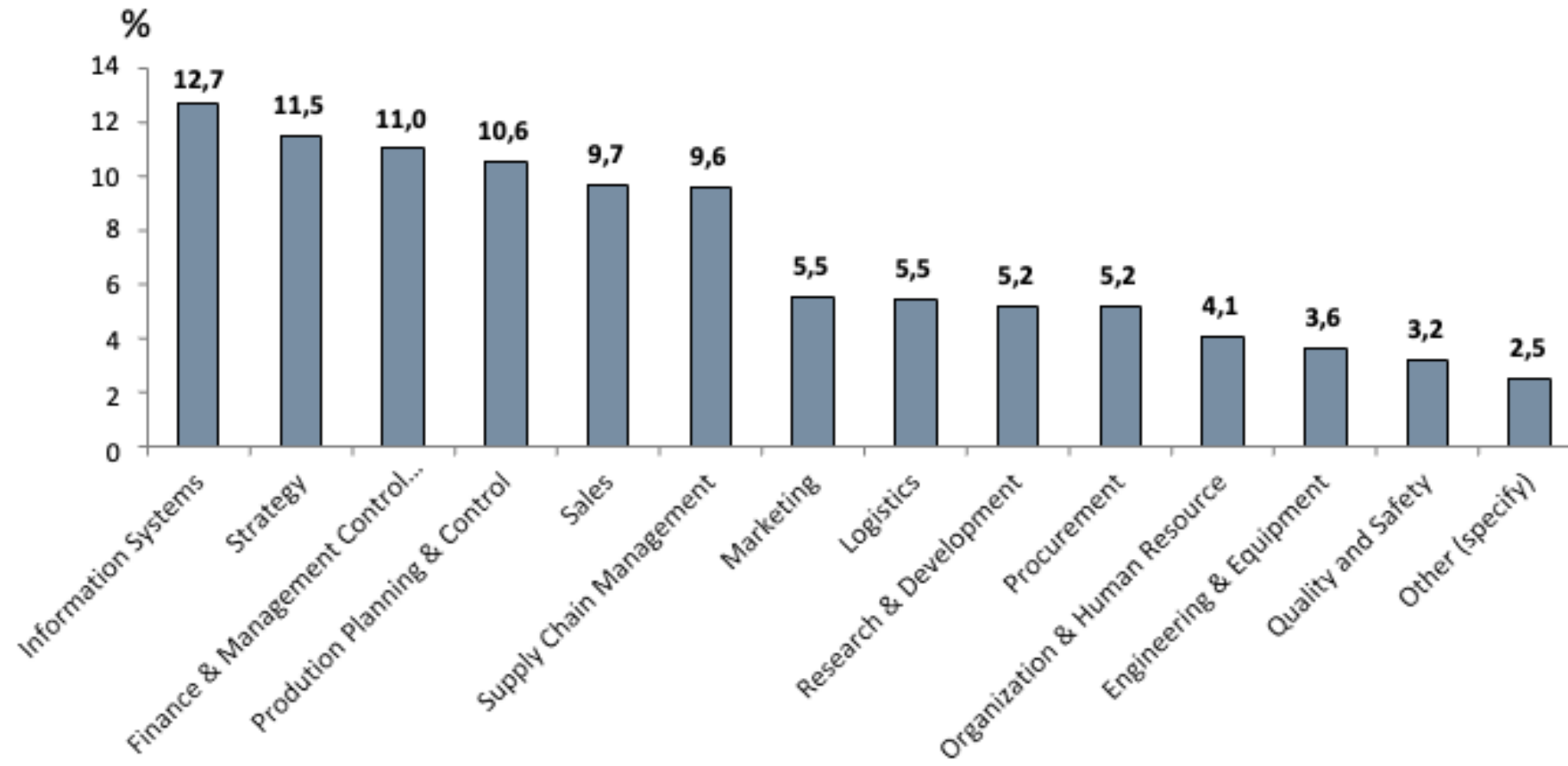
- Admission requirements:
 - Graduation at the Bachelor in no more than four academic years from initial enrolment, i.e. before April 30th of the fifth year after the first enrolment (e.g. October 2016 - April 30th 2021)
 - Adjusted admission threshold* (some integrative exams might be due for students coming from the applicative curriculum):
 - Engineers graduated from PoliMI: $23 + (N-3)/2$
 - Architects and Designers graduated from PoliMI: $26 + (N-3)/2$
 - Engineers from other Italian universities: $26 + (N-3)/2$
 - Other graduates from other Italian universities: $27 + (N-3)/2$
- Timeline and procedure for application: <https://www.polimi.it/en/international-prospective-students/laurea-magistrale-programmes-equivalent-to-master-of-science/applications-procedures/application/>
- Please, make 1 application only for management engineering (there is no difference in the application process for the different majors)

N = number of years required to achieve the Bachelor starting from the first enrollment (e.g. 7 semesters ■ N=3,5)

Main employers



Main jobs



Placement data

MANAGEMENT ENGINEERING

WHAT IS THE EMPLOYMENT SITUATION OF MANAGEMENT ENGINEERING GRADUATES 5 YEARS AFTER GRADUATION?

The following data has been extracted from the 2020 Employment Survey on 2014 Graduates, interviewed 5 years from graduation. Full details on the website <http://cm-careerservice.polimi.it/en/employment-statistics/>
In 2014, 435 Italian students obtained a Master's degree in Management Engineering at Politecnico di Milano. Total respondents to the survey were 234 (coverage rate 54%).

EMPLOYMENT RATE



HAS INCREASED BY 7%*

NET MONTHLY SALARY

€2,301**

HAS INCREASED BY €681*

PERMANENT CONTRACT



HAS INCREASED BY 40%*

WORK IN ITALY



HAS DECREASED BY 9%*



SATISFIED WITH SPECIFIC DEGREE: 92%

Education and training acquired at the university is adequate for the current job

DEGREE FITS WORK: 88%

In order to carry out their job, they need their qualification or an equivalent one

* Compared to data from survey submitted 1 year from graduation

** Standard deviation 630

WHAT HAVE MANAGEMENT ENGINEERING GRADUATES DONE IN THESE 5 YEARS?



HAVE WORKED ABROAD FOR AT LEAST 6 MONTHS (UK, SWITZERLAND, GERMANY)



HAVE OBTAINED A NEW DEGREE WHILE WORKING OR BEFORE
9% POST MASTER DEGREE | 5% PHD



HAVE FOUNDED A START-UP

THEY HAVE CHANGED THEIR JOB AN AVERAGE OF 1.7 TIMES

MAIN REASONS:

PROFESSIONAL GROWTH

47%

BETTER PAY

20%

TO CHANGE SECTOR/ PROFESSION

15%

THEY HAVE IMPROVED THEIR PROFESSIONAL SITUATION:

ECONOMICALLY

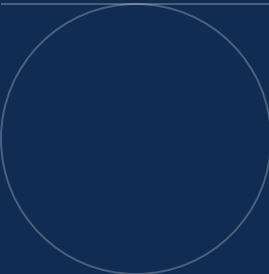
87%

BY DEVELOPING SOFT SKILLS

79%

BY ACCESSING A BETTER POSITION IN THE ORGANIZATION

71%



Thank you!