POLITECNICO DI TORINO

International Activities

May 2009

POLITECNICO DI TORINO

A centre of teaching and research, and one of the most important universities in Europe for engineering and architecture studies, strongly committed to collaboration with industry

The Institution

- Mission
- The Campuses
- Facts and figures

Education: International activity

- International Relations
- Internationalization of Politecnico's campuses in Italy
- Politecnico's presence abroad

Research, Technology Transfer and Services

- Research
- Technology Transfer
- Services
- Finance

Mission

Education

4 Schools of Engineering
2 Schools of Architecture
1 Graduate School

Research

18 Departments

Technology Transfer

Incubator
Business Research Center

Services to the region

Finance

The roots of the future

Historical background

1859: Technical School for Engineers

1862: Italian Industry Museum

1906: Royal “Politecnico di Torino”
Historical seat: the Valentino Castle

1958: Opening of the current Campus in corso Duca degli Abruzzi

The Cittadella Politecnica

The Politecnico Campus is enlarged by an additional 170.000 m2 in an area next to the Corso Duca degli Abruzzi building complex

Cittadella Politecnica:
Classrooms and Laboratories
Research centres
Canteens and Study Rooms University
Sports Centre

The Valentino Castle

XVII century royal residence
seat of the Schools of Architecture
representative site of UN in Torino

The Regional Campuses

Information Technologies and Mechatronics

Textile Engineering

Engineering: Civil - Electronic - Mechanical

Engineering: Plastic Materials - Electrical - Civil - Mechanical

Architecture

Engineering: Information Technologies – Mechanical - Food and Agricultural Engineering – Water

Facts and figures

28.000 students

700 PhD students

Every year:

4.500 new students

2.300 Master of Science degrees

2.000 Bachelor of Science Degrees

Polito students find employment:

82 % within 1 year of graduation
(national average: 61%)

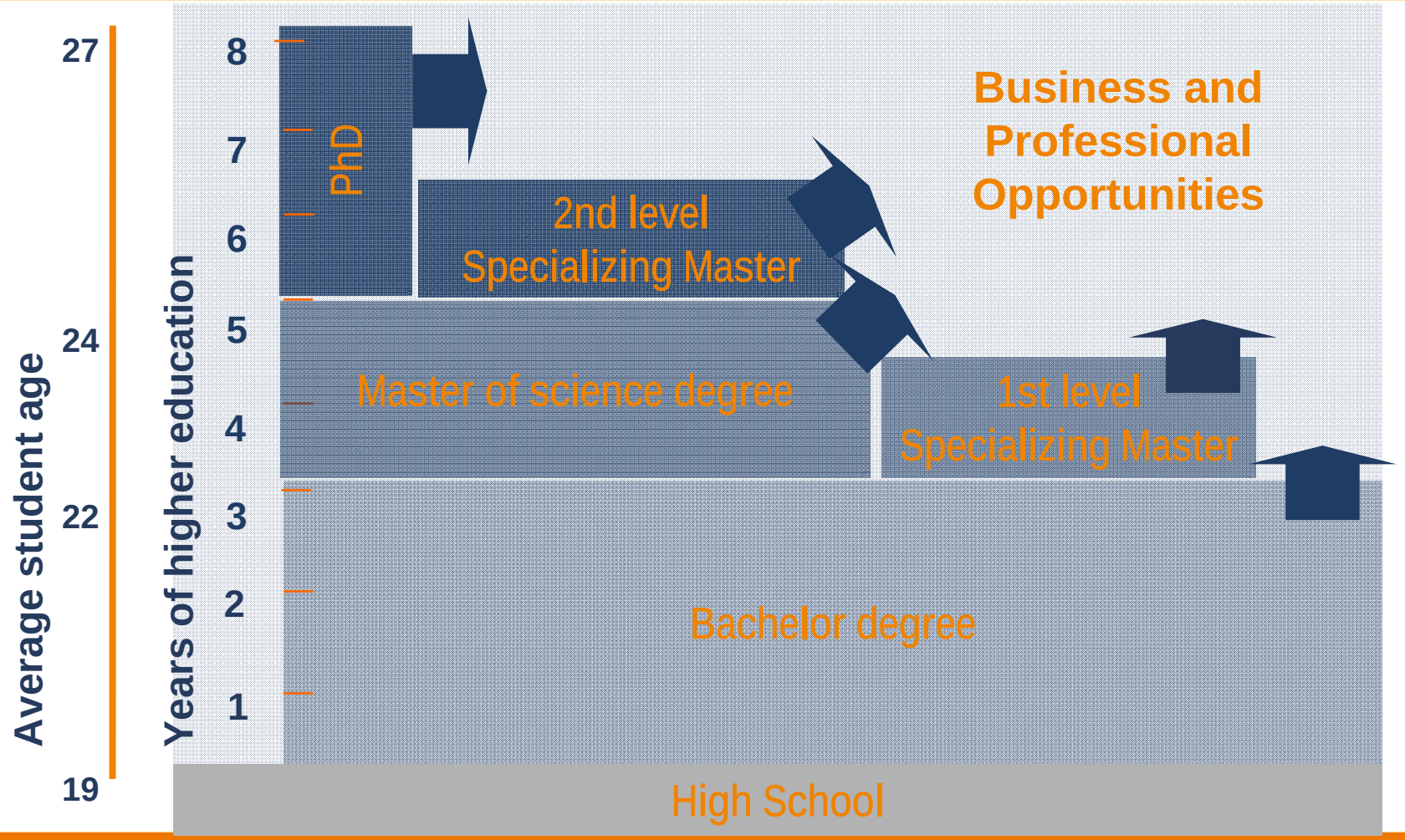
92 % within 2 years of graduation
(national average: 71%)

4 Schools of Engineering
2 Schools of Architecture
900 Lecturers and Researchers

116 courses

34 Bachelor degree courses
35 Master degree courses
20 PhD courses
27 Post-graduate courses

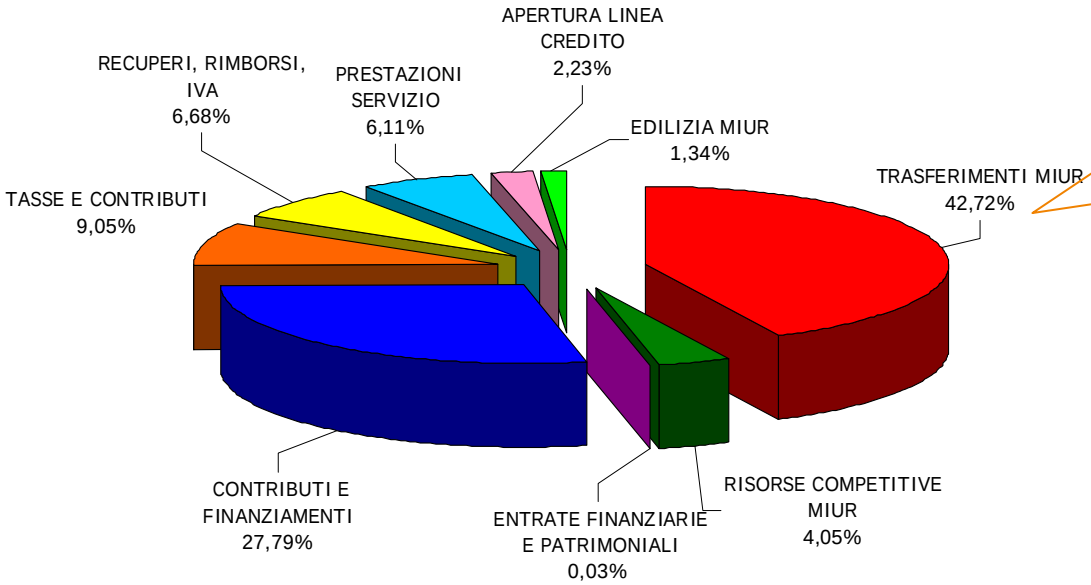
The Educational Model



2009 Budget Forecast

INCOME

300 MLN EUROS



The Italian Government* contributes **129 MLN EUROS**

Ministry For Universities, Education And Research

The reputation

Politecnico di Torino's rating among Engineering universities:

57th in the world
7th in Europe
1st in Italy

Shanghai Jiao Tong University Ranking 2008

University	World Rank
Univ Cambridge	16
Imperial Coll London	27
Swiss Fed Inst Tech - Lausanne	28
Univ Oxford	41
Univ Manchester	44
Chalmers Univ Tech	51-75
Politecnico di Torino	51-75
Swiss Fed Inst Tech - Zurich	51-75
Tech Univ Denmark	51-75
Univ Bordeaux 1	51-75
Univ Bristol	51-75
Univ Leuven	51-75
Univ Sheffield	51-75

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International Activities

At the European and global level:

A network of international relations

- agreements with foreign universities and institutions
- active participation in several international university networks

Internationalization of Politecnico's campuses in Italy

- student mobility and attraction of international students
- extended availability of courses in English
- attraction of international researchers and professors

Politecnico's presence abroad

- establishment of international campuses
- dedicated courses supplied to foreign universities

International Agreements and Networks

Agreements

300 cooperation agreements with foreign universities

Double Degree partnerships with 89 European and non-European Universities

Networks

- CLUSTER
- COLUMBUS
- PEGASUS
- TIME
- ECIU
- …

Student Mobility

3.000 international students attending the Politecnico

35% of the courses offered in English

500 Politecnico students studying abroad in prestigious universities

Politecnico di Torino offers International mobility programmes and exchange opportunities in a multi-cultural and multi-linguistic environment

International programs at Polito

Some international course programs offered in Torino

- Nanotechnologies for ICT: joint master with INPG Grenoble and EPFL Lausanne. The course requires students to move for three semesters from Torino to Grenoble and Lausanne
- MERIT: Master of Science in Information Technologies. Double degree program with UPC, UCL, EPFL.
- TOP-UIC: double degree program with the University of Illinois at Chicago for Polito students in Electronic, Communications and Mechanical Engineering
- Double degree program with Georgia Tech (MSc on ECE courses)
- Automotive Engineering: BSc degree offered fully in English
- Textile Engineering: BSc degree only available in English

Courses in English: some examples

Bachelor of Science

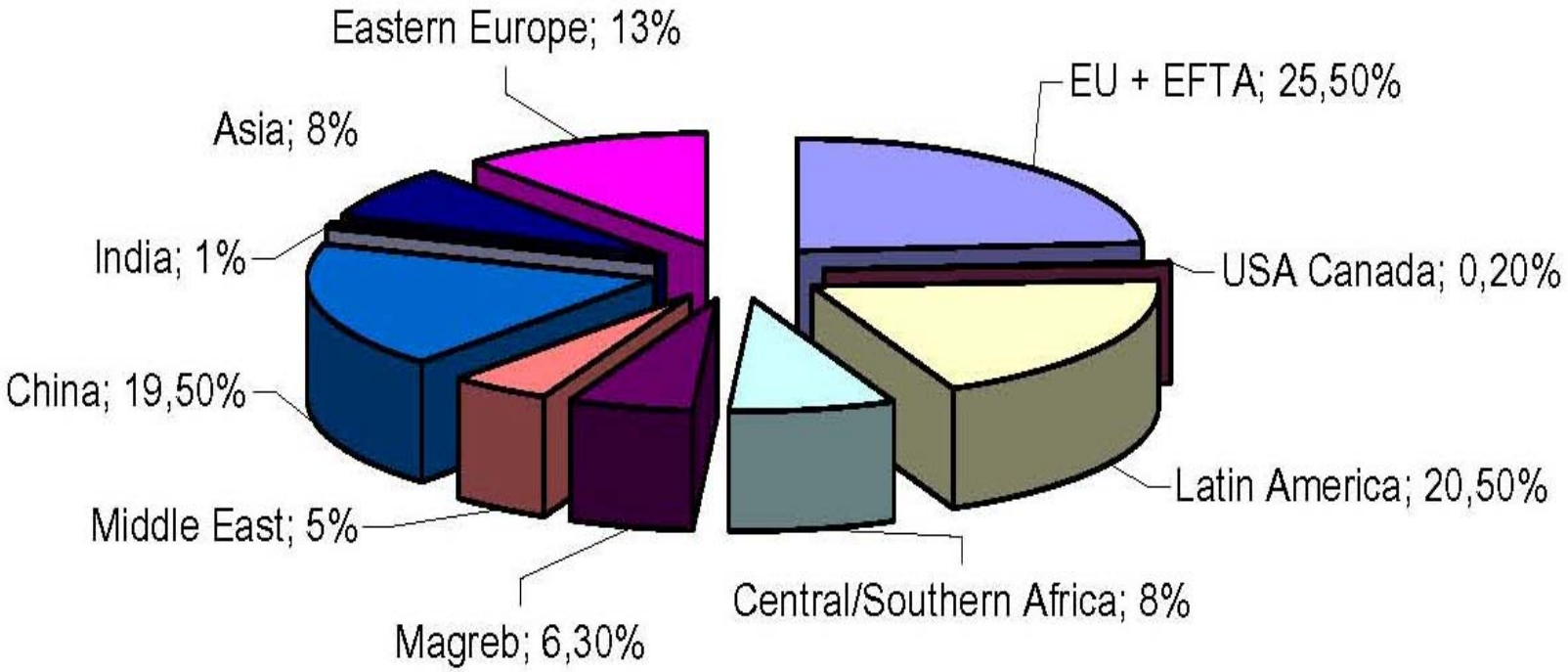
- 1st year for all Engineering Curricula
- 1st year for Architecture Curricula
- Automotive Engineering
- Textile Engineering
- Electronic and Computer Engineering
- …

Master of Science

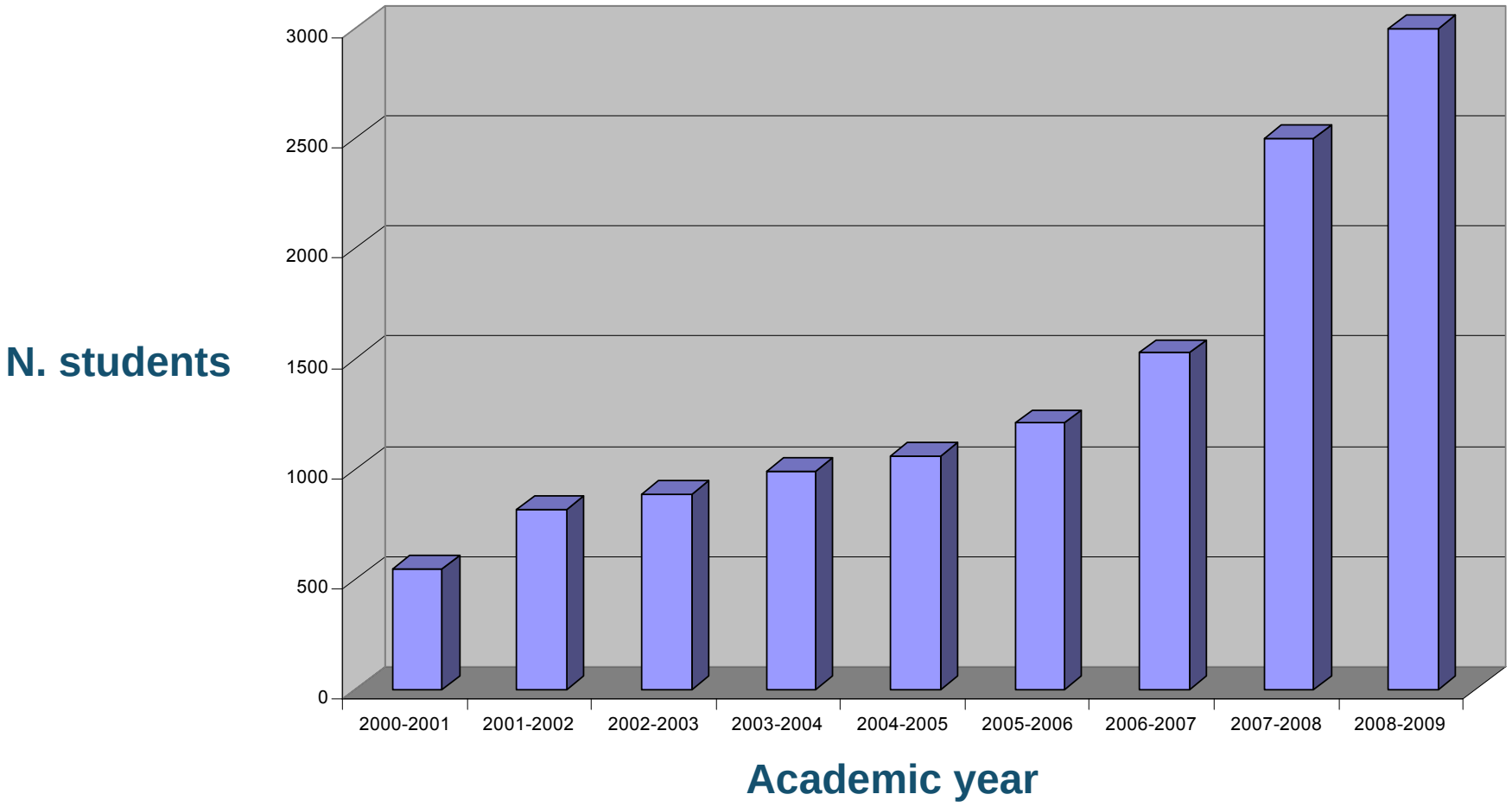
- Computer Engineering
- Electronic Engineering
- Industrial Engineering and Management
- Nanotechnologies for ICT
- Environmental Engineering (Petroleum Engineering)
- …

International Students

2008/2009:
3000 international students coming from 105 countries



International Students



International Visitor Facilities

Specific services for international students, faculty and staff

- support in obtaining the visa
- support in the residence permit procedures at their arrival in Italy
- support for accommodation (university residences or private apartments)
- mother tongue cultural mediators
- Italian language courses
- Online application form

Other services

- access to the student canteens
- access to labs, libraries, sport centres
- Free Wi-Fi high speed internet access

Apply@Polito

Online application form

The application for all international students is carried out via Internet

Includes application to all available Politecnico scholarships

Opened December 2008 for the 2008/2009 academic year

2007/08: 6.700 registrations

Scholarship Programs: some examples

Chinese Scholarship Council Program (CSC)

- long-term scholarships for Chinese students to study abroad
- launched by Chinese Government
- financed by China Scholarship Council

Students currently at Politecnico di Torino:
- 35 PhD
- 11 Master of Science

Chinese University partners:
- Tianjin University
- Harbin institute of Technology (HIT)
- Southeast University, Nanjing (SEU)
- Tongji University, Shanghai
- Shandong University

Scholarship Programs: some examples

ENI - Master of Science in Environmental Engineering (Petroleum Engineering)

- Scholarships for International students attending the Environmental Engineering / Petroleum Engineering Master of Science
- Financed by ENI
- Students selected by ENI
- 2008/09: 57 students, total funding € 1.596.000
- A new cycle every Academic Year

Attraction of international academic staff

Research Fellowships and Visiting Professors Program

- Open to brilliant international post-docs, researchers and visiting professors to collaborate in Politecnico's research projects
- 2 year contracts (renewable to 4 years) for Italian and foreign researchers
- 6 month contracts (renewable to 1 year) for Visiting Professors
- Co-funded by Politecnico di Torino and Regione Piemonte

The 2008 numbers

Research Fellowships
1000 applications received
105 contracts awarded:
58 Italian nationals
11 European
36 Non-European

Visiting Professors
200 applications received
5 contracts awarded

Campuses or Courses Abroad: the offer

Politecnico di Torino can provide support to universities, private companies and other institutions in the realization of new initiatives in Higher Education.

- Consultancy on campus and program structure design and planning
- Faculty training courses in Torino, within Politecnico's PhD and Post-Doc programs
- Specific courses provided locally, with degree awarded by local university
- Full Politecnico degree courses provided locally to existing institutions, with degrees awarded by Politecnico di Torino or double degrees with the local institution
- Opening of Politecnico di Torino branches abroad
- Program funding to be evaluated case by case.

Campuses or Courses Abroad: some examples

Sino-Italian Campus

- Politecnico di Torino Campus in Shanghai
- with Politecnico di Milano and Shanghai Tongji University
- financed by the Italian Government
- The Chinese and Italian students obtain two degrees recognized in both countries

	Bachelor of Science	Master of Science
Scientific area	Mechanical Eng. and ICT	Design
Duration: Chinese students Italian students	 4 years 1st, 2nd, 3rd in China, 4th in Italy 3 years 1st and 3rd in Italy, 2nd in China	 3 years 1st and 3rd in China, 2nd in Italy 2,5 years 1,5 year in Italy +1 year in China
Students enrolled (first cycle)	13 Italian students + 80 Chinese students	14 Chinese students

Campuses or Courses Abroad: some examples

Uludağ Master of Science in Automotive Engineering

- Cooperation with Uludağ University (Bursa - Turkey) and TOFAŞ
- 2-year Master of Science degree

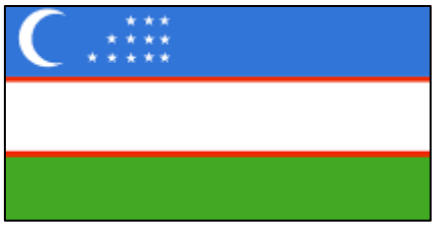
- Program organization by Uludağ with Politecnico's academic support
- Degree awarded by Uludağ
- Politecnico's costs covered by TOFAŞ
  (teaching hours, video conference connections, teaching material, trips, Polito brand and logo, coordination, overheads)

- All subjects taught in English on the Uludağ premises in Bursa
- 1 Politecnico instructor and 1 Uludağ instructor per subject
- Classes: 40% by Politecnico in videoconference from Torino,
  60% by Uludağ based on Politecnico programmes

Campuses or Courses Abroad: some examples

Politecnico di Torino Branch in Tashkent

in partnership with Uzavtosanoat SC
and the Government of Uzbekistan



Project goals:

- Opening of new campus by the Academic Year 2009/10
- Target size: 1000 students
- Bachelor of Science and Master of Science courses
- Automotive engineering, Mechanical and Energy Engineering, Industrial Engineering and Management
- Degrees awarded by Politecnico di Torino according to Italian standards

Support actions:

- Scholarship program for Uzbek PhD students at Politecnico di Torino
- Training programs for Uzbek faculty

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Research

18 departments for research activities

- Industrial Engineering
- Information Technologies
- Civil/Building Engineering
- Environment Engineering
- Management Engineering
- Architecture

Research

800 agreements each year

Institutional partners and businesses

Alenia, Avio, ENI Corporate, Ferrari, FIAT, General Motors Powertrain Europe, HP, IBM, Indesit, Italdesign Giugiaro, Michelin, Microsoft Italia, Nokia, Philips, Piaggio, Pininfarina, Pirelli, Siemens, STMicroelectronics, Telecom Italia, Banca Intesa/SanPaolo, Unicredit ...

Research

MITOR Project

Partnership with
MIT - Massachusetts Institute of Technology

- Research scholarships
- Joint workshops on research topics
- Internship grants for MIT students at local labs and companies

Supported by Compagnia di San Paolo

I3P Incubator

since 2000

Self-contained offices available for new enterpreneurs inside the "*Cittadella Politecnica*"

partners

FinPiemonte, Province of Turin, City of Turin, Chamber of Commerce

Co-financed by the Fondazione CRT

102 new businesses

Incubatore Imprese Innovative Politecnico Torino

In 2004

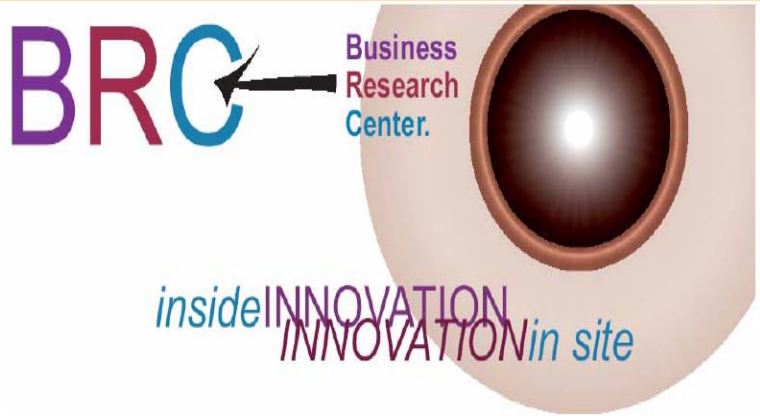
I3P is the winner of the 3rd edition of the "Best Science-Based Incubator Award" among more than 50 Incubators

Business Research Center

The Politecnico Business Research Centre, within the Cittadella, is the place dedicated to cooperation in research and education between the Politecnico and industries.

Spaces for offices, laboratories and industry facilities are available for this aim.

(www.research.business.polito.it)



80 patents: 22 co-owned by Politecnico

12 spin-offs (Politecnico shareholder)

6 academic spin-offs:
Politecnico is not a shareholder, but contributes in kind with personnel, offices, etc…

Business Research Center

The main partnerships

GM Powertrain

MICROSOFT ITALIA

JAC Automotive

VISHAY Semiconductor Italia

Asja Ambiente Italia

Indesit Company

Intelligence Focus

and many others …

GM Powertrain Europe Research Center

June 2008

General Motors Powertrain's main research centre for the development of Diesel engines, hybrid engines and electronic control systems

The agreement

A series of collaborations and exchanges in research and education, including PhDs, masters, degree dissertations, apprenticeship and organization of joint seminars

20,000 sqm equipped with laboratories

16 test cells and management offices

500 highly qualified professionals

Services to the Territory

- Research and consulting activity on commission or in partnership with businesses and public institutions
- Analyses, tests and calibrations
- On-going education on commission or in partnership with businesses and public institutions
- Partnerships with other universities on specific research/teaching projects

Venture Capital Hub

The VC Hub draws inspiration from some American experiences

The Italian VC Hub groups the main private investors focused on hi-tech, hi-growth start-ups and SMEs.

The Hub is:

- A physical place where the main actors of the Venture Capital can coexist.
- A place where different players can compare their investment strategies to activate common programs and to co-invest at national level.

Main advantages

- Stronger visibility towards the entrepreneurs community about venture capital presence and approachability.
- Reliability assurance towards the entrepreneurs community: the VC Hub members subscribe a code of conduct.
- Easy access for the venture capitalists to the competencies of the new “Cittadella Politecnica” campus of Politecnico di Torino

Venture Capital Hub

14 FUNDS
covering all the Venture Capital value chain segments: from angel investing to the early stage, up to the late stage

Six International Funds

- intel capital
- DOUGHTY HANSON & Co Technology Ventures
- 360 CAPITAL PARTNERS Investing in Innovation, full scale
- Jupiterventure
- SOFINNOVA PARTNERS
- TLcom Capital LLP

Eight Italian Funds

- INNOGEST CAPITAL
- Piemontech
- StrategiaItalia
- FRIULIA FINANZIARIA FVG
- Eporgen Venture
- CLUB DEGLI INVESTITORI
- QUANTICA SGR
- FT SGR

The funds convey financial resources for more than 1 BILLION EUROS

THANK YOU

for your attention!