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## INSTITUTO SUPERIOR TÉCNICO



Lisbon-Portugal



### SCIENCE AND TECHNOLOGY EDUCATION AT IST The Present and the Future

Prof. Carlos Matos Ferreira  
President of IST

Stockholm, June 2005

1



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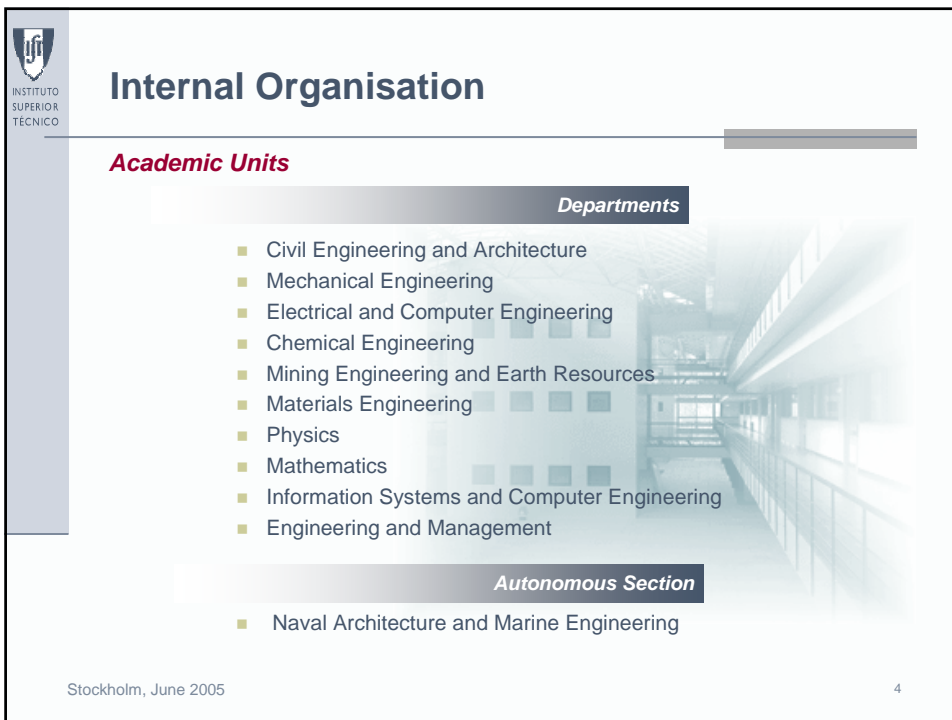
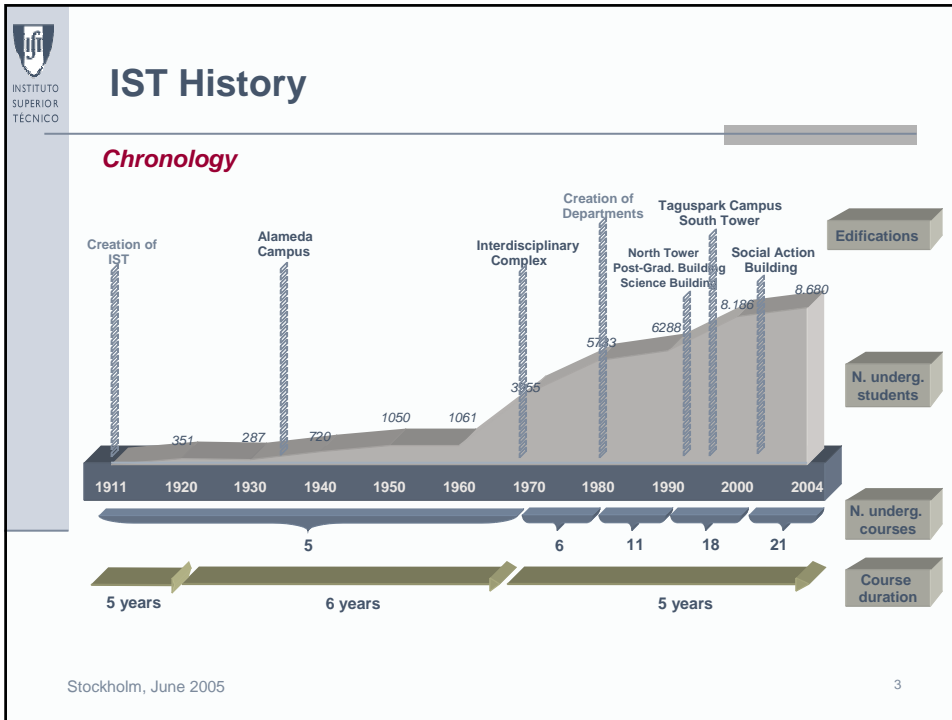
## Summary



- **History**
- **Internal Organisation**
- **Present**
  - *Undergraduate Programmes*
  - *Master (MSc) Programmes*
  - *Doctoral (PhD) Programmes*
- **Evaluation and Accreditation Systems**
- **Future under Bologna Process**

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2



## Present



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5

## Present

### **Undergraduate Programmes**

#### **Alameda Campus**

7719 Students

- Aerospace Engineering
- Applied Mathematics and Computation
- Architecture
- Biological Engineering
- Biomedical Engineering
- Civil Engineering
- Chemical Engineering
- Chemistry
- Electrical and Computer Engineering
- Environmental Engineering
- Information Systems and Computer Engineering
- Materials Engineering

- Mechanical Engineering
- Mining and Geological Engineering
- Naval Architecture and Marine Engineering
- Physics Engineering
- Territorial Engineering

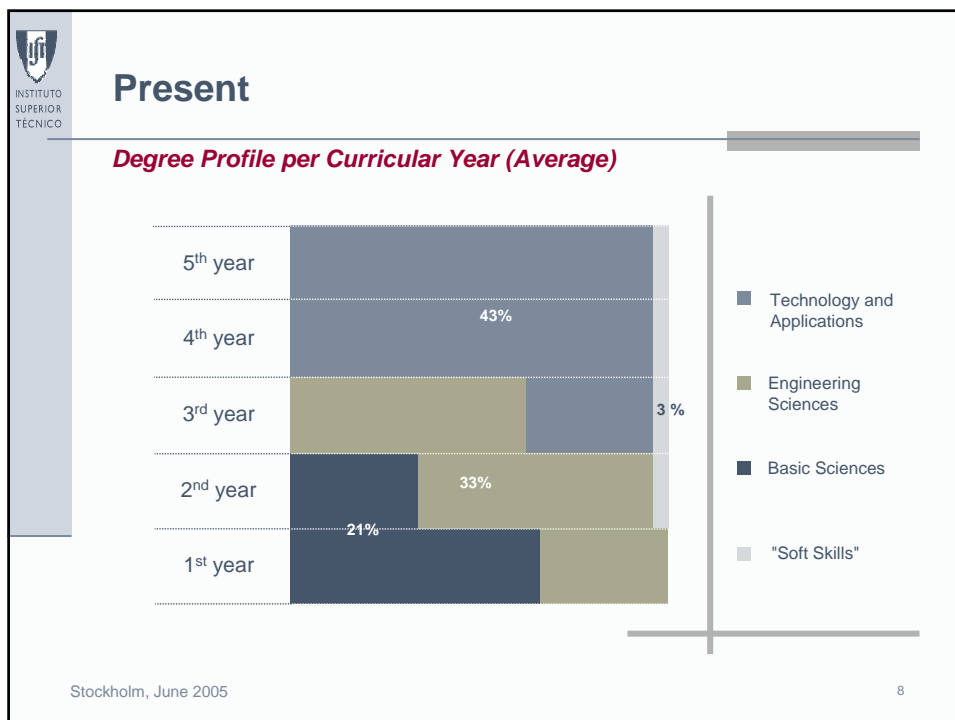
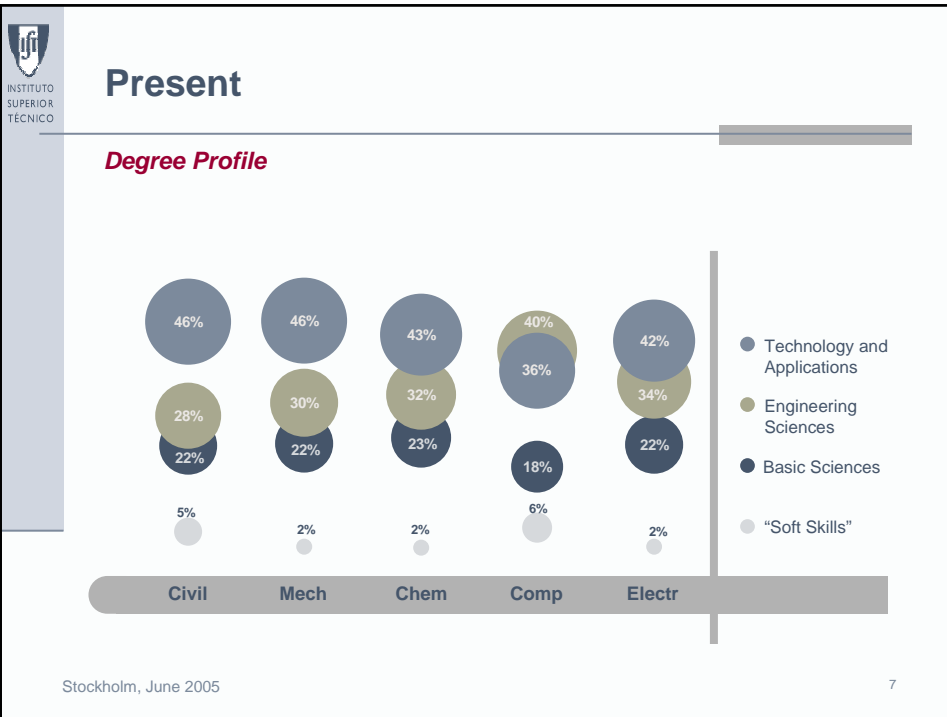
#### **Taguspark Campus**

961 Students

- Electronics Engineering
- Industrial Engineering and Management
- Information Systems and Computer Engineering
- Information and Communication Networks Engineering

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6



## Present

### Master (MSc) Programmes

- Biotechnology (Biochemical Engineering)
- Chemical Engineering (Applied Chemistry)
- Electrical and Computer Engineering
- Information Systems and Computer Engineering
- Aerospace Engineering
- Naval Architecture and Marine Engineering
- Mechanical Engineering
- Design Engineering
- Hydraulics and Water Resources
- Geotechnics for Civil Engineering
- Structural Engineering
- Construction
- Rehabilitation and Conservation of the Built Heritage
- Urban Studies and Territorial Management
- Transportation
- Geographical Information Systems
- Materials Engineering (*inter-institutional*)
- Materials Science and Engineering
- Surface Science and Engineering (*inter-institutional*)
- Earth Resources
- Ecology, Management and Modeling of Marine Resources (*inter-institutional*)
- Physics Engineering
- Physics
- Mathematics and Applications
- Statistics
- Operational Research and Systems Engineering
- Logistics (*inter-institutional*)
- Engineering Policy and Management of Technology
- Technological Innovation and Industrial Management
- Strategic Management and Development of Tourism
- Safety and Health in the Workplace

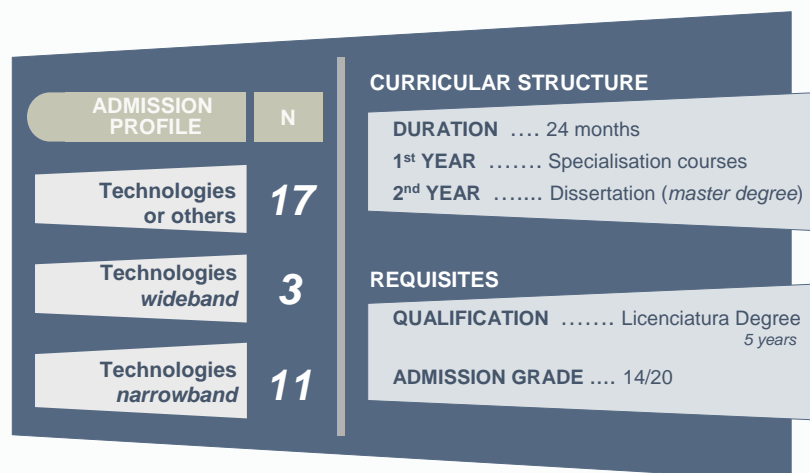
1089 Students

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9

## Present

### Master Characterisation



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10

## Present

### *Doctoral (PhD) Programmes*

- Chemical Engineering
- Chemistry
- Biotechnology
  
- Electrical and Computer Engineering
- Information Systems and Computer Engineering
  
- Aerospace Engineering
- Naval Architecture and Marine Engineering
  
- Mechanical Engineering
- Environmental Engineering
  
- Civil Engineering
- Territorial Engineering
- Urban and Regional Planning
- Transportation
  
- Materials Engineering
- Mining Engineering and Earth Resources
- Engineering Sciences
- Physics
- Physics Engineering
- Technological Physics Engineering
  
- Mathematics
- Systems Engineering
- Industrial Engineering and Management



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11

## Evaluation and Accreditation Systems

### *Evaluation: Basic Principles of the Model*

Objective	Quality Improvement
Implementation	Compulsory (5 year cycles)
Evaluation Method	Internal + External (peers)
Work Basis	Self-Evaluation Report
External Experts	Academics + Professionals
Procedures	Transparent + Public
Evaluation Promoter	Association of Universities

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12

## Evaluation and Accreditation Systems

### *International Evaluation Experiences*

Project	Promoters	Objective	Participants
European Pilot Project for Evaluating Higher Education	EU (European Union)	Testing Evaluation Methodologies	IST (Mechanical Engineering Programme) 17 European Countries 43 HEI's
Institutional Quality Evaluation Programme	CRE (Association of European Universities)	Testing a Model for Quality Management Process in HEI's	Technical University of Lisbon 13 European Universities
Total Quality Management at Universities	CESAER / EFQM (European Foundation for Quality Management)	Testing a Model for Excellence in HEI's	2 CESAER Members-IST and RWTH-AACHEN

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13

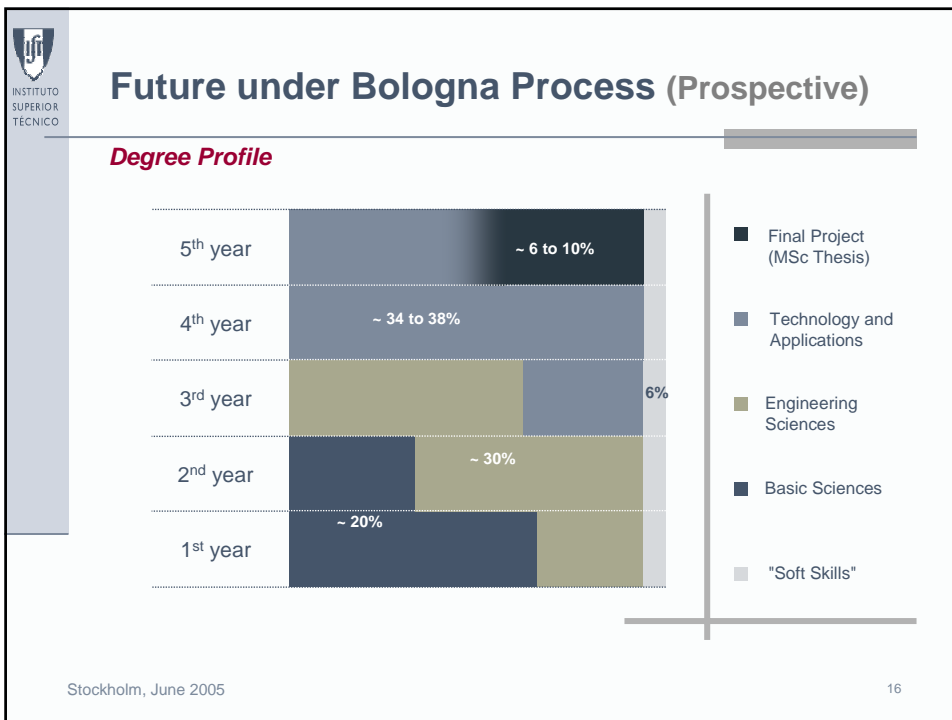
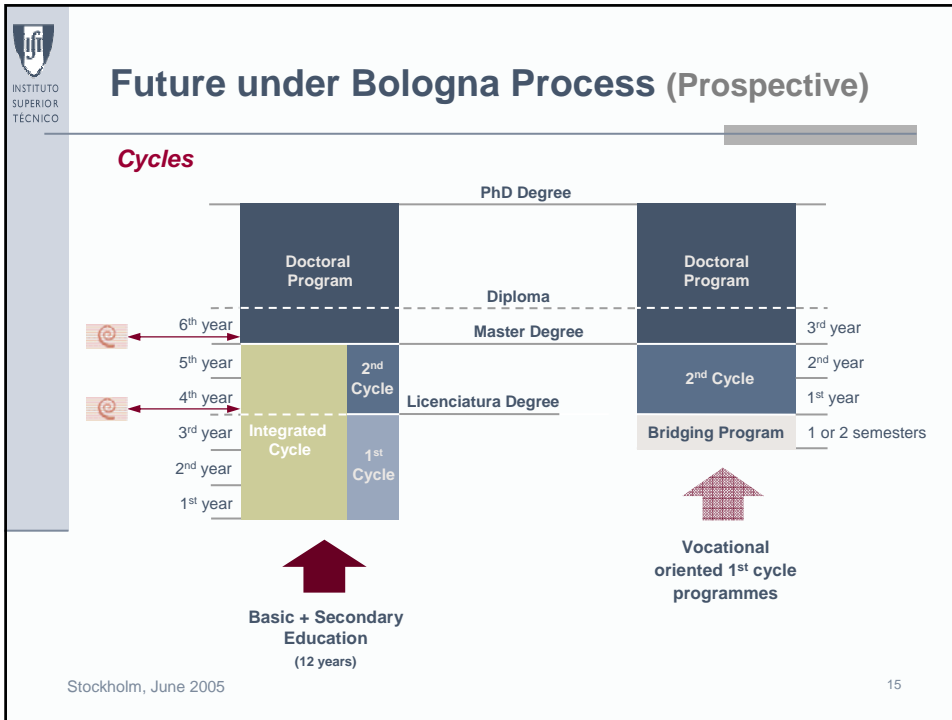
## Evaluation and Accreditation Systems

### *Accreditation: Basic Principles of the Model*



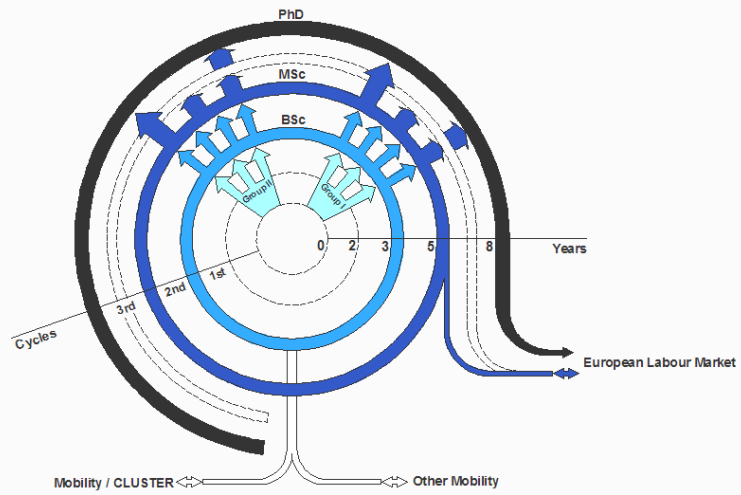
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14





## Future Under Bologna Process (Prospective)



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17