



澳門大學

UNIVERSITY OF MACAU



Portuguese Universities in transition from Tradition to European Union Bologna's Higher-Education Framework System:

University of Macau as a Case Study

by

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with the collaboration

of

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Taiwan Normal University – November 25th, 2005





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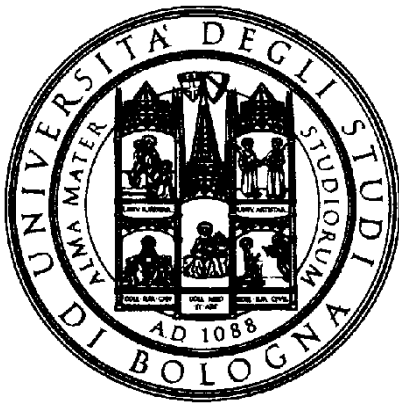
1. Historical University Background

Europe, Portugal and Macao

University of Bologna (1088)

“was probably the **first University in the western world.**”

Its history is one of great thinkers in science and the humanities, making it an indispensable point of reference in the panorama of European culture.”



1. Historical University Background

Europe, Portugal and Macao



D. Afonso Henriques (1109)

First King of Portugal in 1139

Established a **Monarchy** that lasted until 1910

University of Coimbra (1290)

First Portuguese University

Initially created in **Lisbon** in 1290 moved in 1308 to **Coimbra**



Universidade de Coimbra



1. Historical University Background

Europe, Portugal and Macao

1. In **1910** a **Republican Revolution** deposed the Portuguese monarchy starting the **First Republic**.
2. Political chaos, strikes, harsh relations with the Catholic Church, and considerable economic problems aggravated by a disastrous military intervention in the First World War led to a **military coup d'état** in **1926**, installing the **Second Republic** that would become the **Estado Novo** in **1933**, led by António de Oliveira Salazar, an authoritarian **right-wing dictatorship**, which later evolved into a type of single party corporate regime.
3. Later, Portugal became a founding member of NATO and EFTA, as well as OECD. **India** invaded and **liberated Portuguese occupied parts of India** (Goa, Damão and Diu) in **1961**. Independence movements also became active in Africa, namely in Angola, Mozambique and Portuguese Guinea, and a series of colonial wars started. **The burden of the many colonial overseas wars and the lack of political and civil freedoms** led to the end of the regime after the **Carnation Revolution** in **April 25 of 1974**, an effectively **bloodless left-wing military coup**, that promised to install a new democratic regime, starting the **Third Republic**. In **1975**, Portugal had its **first free multi-party elections since 1926** and granted independence to its colonies in Africa and later (**1999**) **returned Macao to China**.



1. Historical University Background

Europe, **Portugal** and Macao

Until **1975** only 4 Major Public Universities and 1 Private:

University of Coimbra (1290)



University of Lisbon (1384)

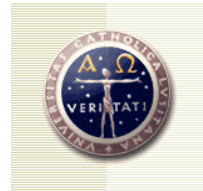
University of Porto (1762) **U. PORTO**



Technical University of Lisbon (1930)

Portuguese Catholic University (1967)

(Church)



1. Historical University Background

Europe, Portugal and Macao

1. The mid-**1970s** after the *Carnation Revolution* marked a new era in the development of **Portugal's Higher Education** with **many public universities** and **polytechnics** opening in many cities, such as the **University of Aveiro**, the **University of Minho**, the **New University of Lisbon**, the **University of Évora**, the **University of Algarve**, and in the Portuguese Atlantic islands the **University of Madeira** and the **University of Azores**, as well as several others, in the **university sub-sector**.
2. On the other hand, also the **Lisbon Polytechnic** and **Porto Polytechnic** were opened in the **polytechnic sub-sector**.
3. The **Council of Rectors of Portuguese Universities (CRUP)** is **created in 1979**, comprising 14 public universities plus the Catholic university.
4. Subsequently, in the mid-**1980s** several **private universities** opened.
5. The **Association of the Portuguese Speaking Universities (AULP)** is **created in 1985**, comprising universities and polytechnics from Portugal, Brazil, and also from Africa, namely Cape Vert, Angola and Mozambique.



1. Historical University Background

Europe, Portugal and Macao

1. European HE System: **Extremely diversified from country to country**, namely, in one side the **British** system with a secondary education of **13-years** followed by a **3-years bachelor degree** in the university, on the other the **Continental systems** with **12-years** in the **secondary** and then **bachelor's** of many different kinds, **4-** or **5-years**.

2. Portuguese HE System: **Also complicated** with **12-years** in the secondary and **4-years bachelor degrees** in some universities (in the **business area**), but in most cases **5-year bachelor's** (in **engineering, architecture** and **law**). In the **polytechnics** there are **3-years degrees**, designated as **"bacharelato"**.

3. European HE System presents **great disadvantages** when compared with the **United States**, especially in terms of the **late arrival to the job market** due to the **long duration of the first cycle** of university education (bachelor).

4. Then, **EU countries** agreed **first** in the **Lisbon Convention (1997)** later followed by the **Bologna Declaration (1999)**, that: **"Up to 2010, to reform the HE system in order become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion"**.



1. Historical University Background

Europe, Portugal and Macao

Prince Henry the Navigator (Dom Henrique) (1394)



Started the Portuguese discoveries by sea in **1420** which led them to Africa, Brazil, India, Siam, Malaysia, Burma, China, Taiwan - "**Formosa**" and Japan

Portuguese First Arrival in Macao (1553)



First Photo of a Portuguese Settlement (1639)



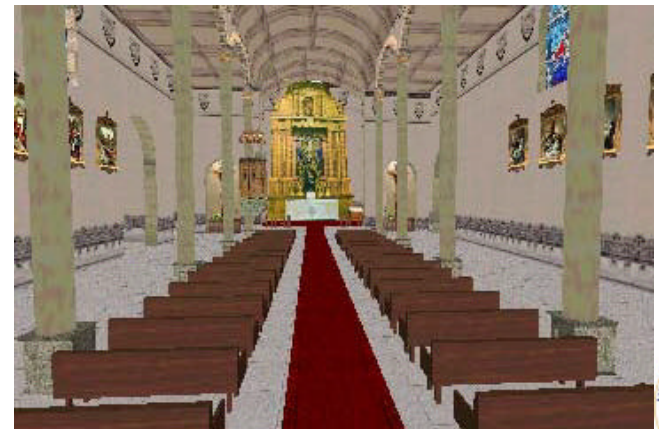
2. Saint Paul's College

Very First **western-style University in China** and even in the Far East
established by the **Jesuits (1594)**

Church was constructed in **1635** and burned in **1835**



Reconstruction in Virtual Reality developed by a UM
Master student in **1999** and based on historical data.



3. University of East-Asia



Private University created with an investment from a company – Ricci Island West Limited (incorporated in Hong Kong and registered in Macao) in **March 28, 1981**, by then it was not possible to create other universities in **Hong Kong**, so most of the **students** came from there.

Included: **The University College** with Schools of Arts, Business Administration, and Social Sciences, offering **3-years bachelor degrees** (British System); **The Junior College** offering Associate Degrees; and **The College for Continuing Education**.

UNIVERSIDADE DA ÁSIA ORIENTAL, MACAU
澳門東亞大學
UNIVERSITY OF EAST ASIA, MACAU

Academic Year 1988/1989

Became a **Public University** after being bought by **Macao Foundation** (public foundation owned by the Government). Most of the students started to be from **Macao** – Needed due to Joint-Declaration Portugal/China (**1987**).

Included: **Faculties of Arts, Business Administration, Social Sciences, and Science and Technology** offering now **4-years bachelor degrees**; **The School of Education**; **The Macau Polytechnic** offering diploma programs and “Bacharelato” - **3-years**;



Dr. Henry Kissinger addressing the Congregation after receiving his honorary doctorate



3. University of East-Asia

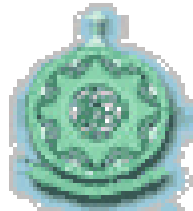
Also: **Department of Portuguese Studies**; **Center for Translation and Interpretation**; **Law Program** offering **5-year bachelor degree**; **Public Administration Program 4-years** to train senior staff for **Macao Civil Service**.

From **UEA** in **1991 3 Macao HE institutions** emerged:



*Undergraduate and Postgraduate
Bachelor, Master, Ph.D.*

University of Macau (Public)



Bacharelato, Bachelor and Masters

Macao Polytechnic Institute (Public)



*Undergraduate and Postgraduate
(Distance Education)*

Asia International Open University (Private)



4. University of Macau (UM) and Macao HE System



University of Macau (1991)

[commemoration of Silver Jubilee in 2006]

Leading and Comprehensive Higher Education Institution in Macao

Member of several international higher education associations

[IAU, IAUP(VP), AUAP(VP), CRUP, AULP(VP), UMAP, APHERN]

Mission and Objectives:

To train **High Quality Talents** for Macao

To improve **Teaching Quality** & competitiveness

To strive for **Excellence** in **Scientific Research**

To strengthen **Academic Exchange** & Co-operation

To promote **Quality** in the **Admin Management**

To be a **University** with **International Standards**



4. University of Macau (UM) and Macao HE System

Academic Units:

Faculty of Business Administration

Faculty of Education

Faculty of Law

Faculty of Social Sciences and Humanities

Faculty of Science and Technology

Centre for Pre-University Studies

Centre for Continuing Education and Special Programmes

English Language Centre

Centre for Macau Studies



4. University of Macau (UM) and Macao HE System

Academic Programs:

25 **Ph.D.** program areas

32 **Masters** degree programs

35 **Bachelor** degree programs (4-years, except **Law 5-years**)

*(including **Gaming Management** in cooperation with University of Nevada, Las Vegas)*

3 "**Bacharelato**" (3-years) degree programs (phasing-out)

English is the main **Medium of Instruction**

[In **Faculty of Law** – **Chinese** and **Portuguese** official languages at **Bachelor** level (*Macao Law is Continental based on Portuguese system*) and also these 2 languages plus **English** at **Master** level: **Master in International, European and Common Law** and soon **Master in International Business Law**]



4. University of Macau (UM) and Macao HE System

Students: Total number: 5662

4113 undergraduate

1187 graduate

262 others

Selective student recruitment

1/3 of applicants (from local)

1/15 of applicants (from the mainland)

Admission 2005/2006:

Graduate Student

9 PhD students (44 applicants)

322 Master students (800 applicants)

228 local and 103 from the Mainland

Most students from China are **top students** recommended by Ministry of Education and other universities

Undergraduate Student

more top students (up 15%) recommended by local schools

higher admission scores (up 5%~10%) for local students

more high score achievers in the admission chose to study in UM

more applications (up 100%) from China (1700 to 3500)

higher admission scores for Mainland students (close to the admission score to the Key universities in China)



4. University of Macau (UM) and Macao HE System

Statistics for Total Number Registered Students (by Faculty)	PhD	Master	Bachelor	Bacharelato	Postgraduate Certificate
Faculty of Business Administration	4	204	1509		
Faculty of Education		124	352	146	81
Faculty of Law		101	463		35
Faculty of Social Sciences & Humanities	4	315	1293		
Faculty of Science & Technology	26	409	496		
Total	34	1153	4113	146	116

*Among these around 100 are **exchange students in BA** mostly from European countries*



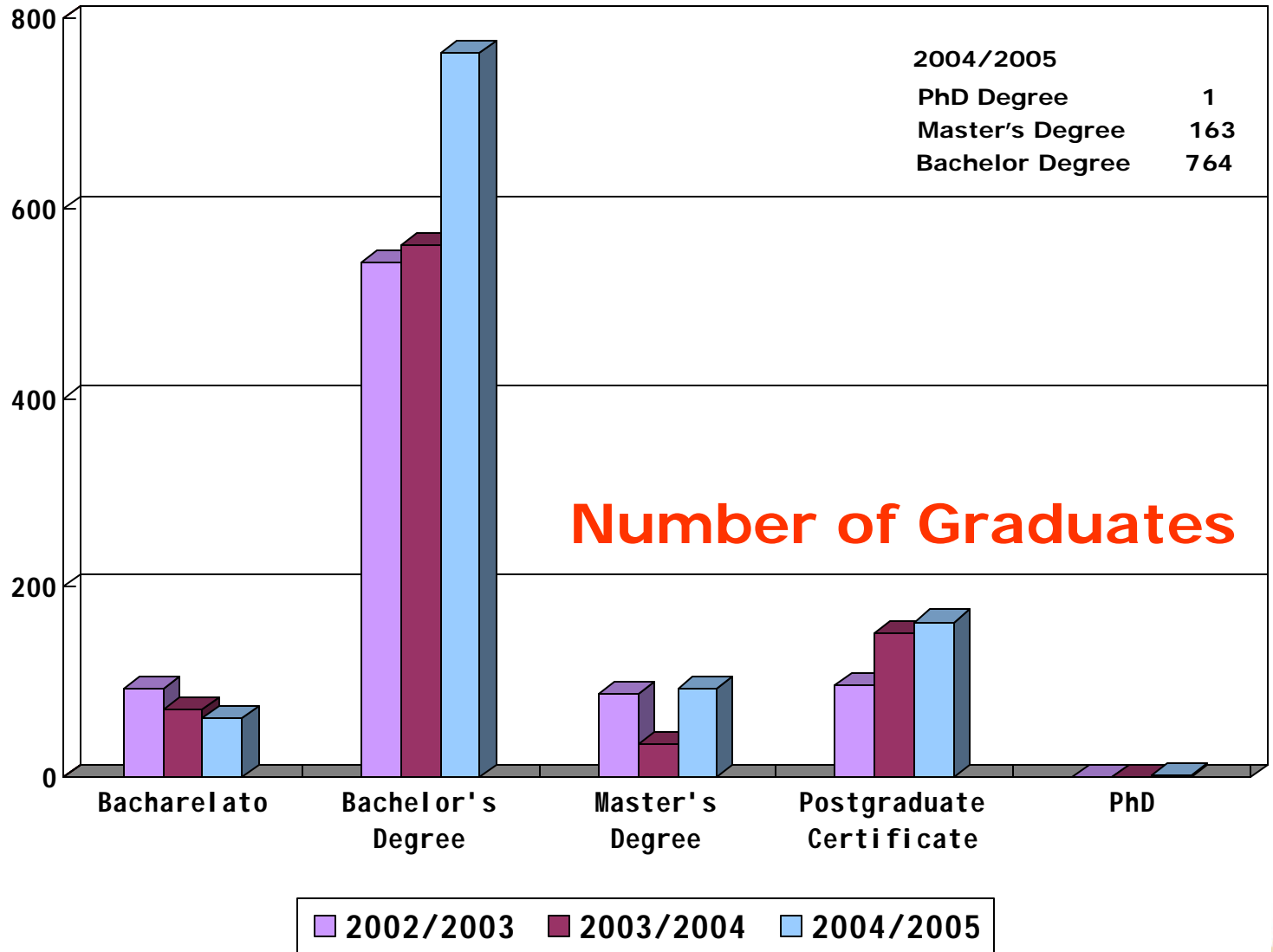
4. University of Macau (UM) and Macao HE System

Programmes	Doctoral Degree	Master's Degree	Postgraduate Certificate	Bachelor's Degree	Pre-U Studies	Total
Macao	3	215	62	924	309	1513
Mainland China	5	98	0	208	53	364
Hong Kong	1	4	0	1	7	13
Taiwan, China	0	2	0	0	0	2
Korea	0	1	0	0	1	2
Portugal	0	0	0	1	0	1
Japan	0	1	0	1	0	2
Mozambique	0	2	0	3	0	5
Russia	0	0	0	1	0	1
United States	0	0	0	2	0	2
Singapore	0	0	0	1	0	1
Guinea Bissau	0	0	0	7	0	7
Angola	0	0	0	1	0	1
Timor	0	0	0	1	0	1
Italy	0	0	0	1	0	1
Total	9	323	62	1152	370	1916

Statistics for Newly Registered Students 2005/06 (by countries/regions)



4. University of Macau (UM) and Macao HE System



4. University of Macau (UM) and Macao HE System

Statistics for 2004/2005 Number of Graduates (by Faculty)	PhD	Master	Bachelor	Bacharelato	Postgraduate Certificate
Faculty of Business Administration		38	246		
Faculty of Education		26	124	62	53
Faculty of Law		7	70		40
Faculty of Social Sciences & Humanities		40	241		
Faculty of Science & Technology	1	52	83		
Total	1	163	764	62	93

The **PhD Panel** (including scholars from Harvard University, University of Ghent Belgium, Beijing University and HKUST) highly commended the achievement of our **first PhD graduate in mathematics**.

Since the beginning **(in 25-years)** close to **15,000 Graduates**, **2,000 Post-Graduates** with **8 Ph.Ds.** (**high-level** with external examiners – **2 Joint Ph.D. UM/Technical University of Lisbon**).



4. University of Macau (UM) and Macao HE System

Academic Staff:

Open international recruitment of highly qualified academic staff

Presently **344** full-time academics

22 Professors

47 Associate Professors

126 Assistant Professors

149 Lecturers/Language Instructors

More than **56%** of **Ph.D. Holders** from prestigious universities worldwide

Appointment of **Sir James Mirrlees** (Nobel Laureate in **Economics**) as **Distinguished Professor of Economics** and Director of a proposed Institute of Economics Studies



4. University of Macau (UM) and Macao HE System

Academic Activities:

A wide range of academic conferences, symposia, seminars and lectures were organized in 2004/2005

19 conferences and symposia

International Forum on Chinese Culture in the 21st Century

International Symposium on National Identity and the Future Cross-Strait Relations

Gaming Management Symposium 2004

The 7th IEEJ / IEEE International Analog VLSI Workshop (AVLSIWS'04)

2005 IEEE International Conference on Robotics and Biomimetics (ROBIO'05)

IEEE Pacific Graphics 2005

Reflection on the Education Reform of Mainland China, Taiwan, Hong Kong and Macao



4. University of Macau (UM) and Macao HE System

Quality in **Teaching**, Research and Administration with **International Standards**

Senate **Sub-Committee** for **Teaching Quality** (created in 2002/03)

Main Tasks:

Teaching Evaluation by the **Students**

Creation of **1 Database** with those **Evaluations** per Course, Program, Department, Faculty and University, merged with the Statistical Data of the **Marking** per Course attributed to the students

Cross-Checking of the information from **Evaluations/Marking Database** to **Detect Irregularities**

Attribution of Teaching Awards, per Faculty, to the Academic Staff that present better **Teaching Quality**

Open Lectures presented by the recipients of **Teaching Awards**

Support to the utilization of **New Technologies** in Teaching

Creation of a **Teaching Handbook** to support **New Academic Staff**



4. University of Macau (UM) and Macao HE System

Quality in Teaching

Teaching Labs:

28 Engineering Labs

5 Language Labs

1 Communication Production Lab

2 Chinese Medicine Labs



1 Multimedia Language Teaching Lab

1 Business Information Systems Lab

1 Centre of Information and Communication
Technology in Education

4. University of Macau (UM) and Macao HE System

Quality in Teaching and Research

Excellent Library Facilities:

210,000 volumes of materials.

electronic periodical subscription increased more than 60% with current subscription of approximately **24,000 periodicals**.

over 70 electronic databanks, an increase of **10. depository library for 16 international organizations**.
"Faculty Liaison Librarian" scheme.

Enhance our digital library with a **focus** on **resource sharing on Macao** related information, we have included databanks such as Macao Electronic Resources, Macao Posters, Macao Journal Articles Index, and Macao Conference Papers Index, etc.

Installed **Metafind** a **powerful automated search facility** which enables users to do a one-time search on specific information on all electronic databases simultaneously.



4. University of Macau (UM) and Macao HE System

Quality in **Teaching** and **Research**

ICT for the University:

Present generation of **students** and **staff** are immersed in **wireless technology**, students able to access to almost all course materials and accessory **teaching materials online**.

Current **mobile learning network** hosts more than **1,700 networked desktops**, **notebooks**, and **workstations** for students and staff members. **80% of teaching staff** use **notebooks** in **lectures** and various forms of teaching activities.



4. University of Macau (UM) and Macao HE System

Quality in Teaching and Research

ICT for the University:

Wireless coverage extended to almost **90% of campus area**, enabling over **1,000 teaching staff and students** to work and communicate conveniently in the campus.

ICT system upgraded (with network backbone of bandwidth up to 8 Gbps, network bandwidth up to 31Gbps). Ratio of dial-up line to user improved to 1:13.

More than 90% of teaching areas equipped with comprehensive **ICT facilities**.



4. University of Macau (UM) and Macao HE System

Always the Most Advanced Computer Network in Macao

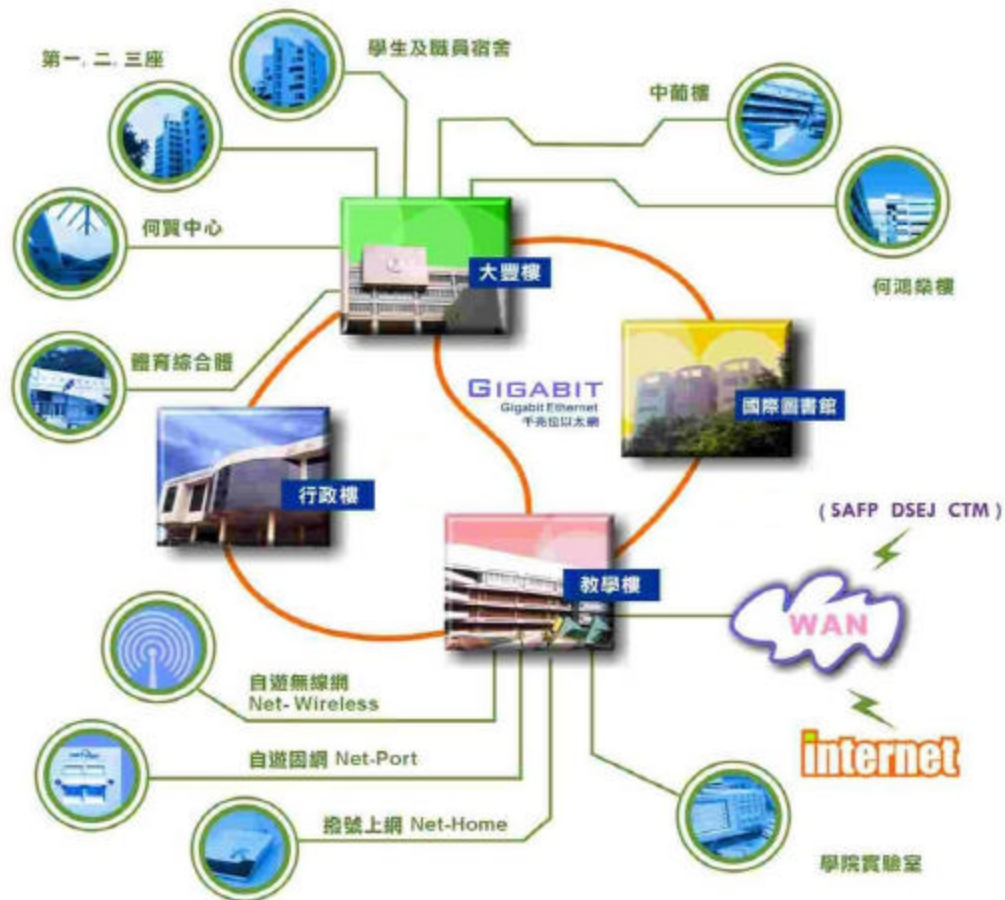
In **1993**, the **first large scale local area network** using **fiber optics and structural cabling** system in **Macao**.

In **1998**, the **first high-speed ATM network** in **Macao**.

Now, campus network **backbone** is Gigabit Ethernet with speed up to **8Gbps**.

Campus network covers **almost** the **whole campus** and **hostel area**.

Manager of the Macao domain **.mo**



4. University of Macau (UM) and Macao HE System

Quality in Research

Close to **100 research projects** supported by **Research Committee** in **04/05** with around **4%** of university's budget

Research cooperation with universities in Mainland China, Hong Kong, Singapore, UK, USA, etc.

Research output:

1 patent in microelectronics being registered in the **US**

100+ international **refereed academic journal papers**

140+ other academic journal papers

300+ conference papers (several with awards)

75 book chapter contributions

7 books

First 5-Year Research Directory (1999-2004), recently finished **contains hundreds of papers** presented and published in **international refereed conferences and scientific journals**.



4. University of Macau (UM) and Macao HE System

Quality in Research

Research Labs:

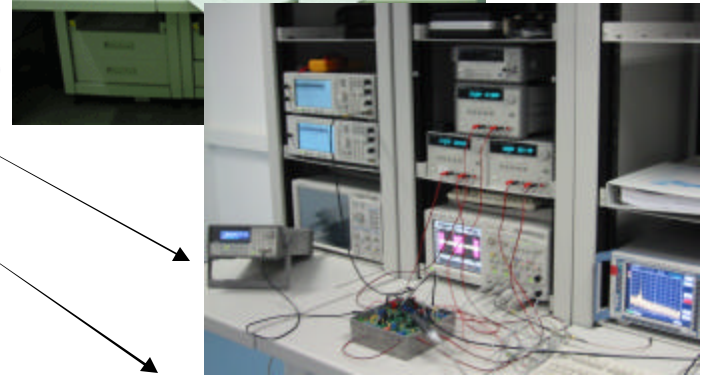
Wireless Communication Lab →

Analog and Mixed Signal VLSI Lab →

Chinese Medicine Lab ↓

Computer Graphics Lab →

Power Electronics Lab →



4. University of Macau (UM) and Macao HE System

Excellence in Research

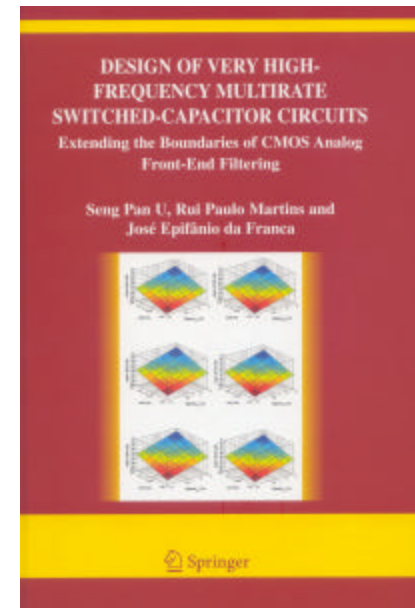
Area : **Microelectronics**

Ph.D. work in Electrical and Electronics Engineering

Presented and Published in World Top Conference in the Field

[International Solid-State Circuits Conference – ISSCC, San Francisco, USA, 2002]

****Only 2 Universities in China were able to publish in 50 editions, Hong Kong University of Science and Technology-HKUST & University of Macau-UM****



Technical Contribution for the creation of a Microelectronics Company – Chipidea Microelectronics-Macao

In collaboration with Chipidea Microelectronics -CI (Tagus-Park) Portugal, UM has **technically supported** the creation of the First Microelectronics Design Center in Macao. **CI is the world's-largest Analog and Mixed-Signal IP Provider.**

The company is managed locally by an **Assistant Professor** of UM (that has got a **joint Ph.D. degree** awarded by **UM** and the **Technical University of Lisbon-Portugal**), that is now f-t in the company and p-t in the university.

It has already **25** Electrical and Electronics Engineers graduated in UM that have passed an intensive period of training in CI in Portugal after graduation.



4. University of Macau (UM) and Macao HE System

Excellence in Research

Student achievements in last academic year is a Testimony of the strength of our programs especially in the area of science and technology

PhD Student Paper Award in **IEEE Design Automation Conference DAC'2005 & ISSCC'2005** (**only 3 awards**)
First-Time from China, HK and Macao



PhD Student Paper with Merit Award in **IEEE International Symposium on Circuits and Systems – ISCAS'2005**
(**25 out of 1622**)

"Silver Leaf Certificate" in PhD Research In Microelectronics and Electronics Conference – PRIME'2005 (**22 out of 111**)

Best Paper Award at 7th IEEJ International Analog VLSI Workshop (**6 out of 150**)

3 papers with **Certificates of Merit** in the Regional Inter-University Postgraduate Electrical and Electronic Engineering Conference – RIUPEEEEC'05 (**6 out of 147**)

Top Prize in the tourism and hospitality category of Asia Pacific Information and Communication Technology Award 2004

3rd and **6th places** in Trading Agent Competition 2004

Champion of the **1st Asia-Pacific Intervarsity Chinese Debate Open (2004)**



4. University of Macau (UM) and Macao HE System

Quality in Teaching, Research and Administration with International Standards

University **administration** successfully completed the latest major review of **ISO 9001/2000** audit program and including faculty's administrative units, all received quality management certification [**obtained in 2003**].

New Challenge : Future Certification ISO 14000

Environmental Factors

Paperless Management and Operation

E-Senate and E-Management Board

(already in place)

Conducted feasibility studies on implementation of environment management systems & standards, & security management of ICT.



4. University of Macau (UM) and Macao HE System

Academic Exchange and Cooperation

Partner with **106 academic institutions** in **27 countries**, newly signed **12 agreements**:

Clare Hall College of **Cambridge University (UK)**, Seton Hall University (USA), Akita International University (Japan), University of Applied Sciences Furtwangen (Germany), Wilfrid Laurier University (Canada), Khon Kaen University (Thailand), Universidade de Caxias do Sul (Brazil), IMC University of Applied Sciences (Austria), Ateneo de Manila University (Philippines), Zhejiang University, Tsingtao University, and Fudan University.

Exchange students (including IAESTE program – for engineering)
Incoming 137 **Outgoing 65**

Important roles in international university associations:

Association of Universities of Asia and the Pacific (AUAP)

Vice-President (2004-2006), President-elect(2006-2008)

International Association of University Presidents (IAUP)

Vice-President (2005-2008)

Association of Portuguese Speaking Language Universities (AULP)

Vice-President for the Asia-Pacific (2005-2008)



4. University of Macau (UM) and Macao HE System

Consultancy, Research & Development Services

The University offers its services to the community through ongoing consultancy and research and development services in different areas covering **education, engineering, economics and business, public policy,** and **science & technology.**

We carried out **55 projects** for **9 government departments** and **13 private institutions** in **2004/05.**

Projects include **quality of life indicators** and outcomes, **legal issues, public policy,** development of a fleet management system using GPS and artificial intelligence, regulation, inspection, and design of tank vehicles carry fuel, and quality assurance for car inspection lines.

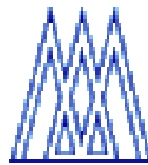


4. University of Macau (UM) and Macao HE System

Under the **Supervision** of the **Secretary for Social Affairs and Culture**

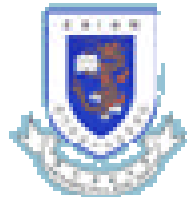
Coordinated by the Higher Education Supporting Office – GAES (<http://www.gaes.gov.mo>)

Besides the institutions already mentioned and originated from **UEA**, namely **UM**, **MPI** and **AIOU**, there are also the following:



Diplomas and Associate Degrees

MMI – Macau Institute of Management (1985) (Private)



*Bachelor Degrees for SF Officers
in cooperation with UM*

ESFSM - Macau Security Force Superior School (1988) (Public)



Bachelor and Masters Degrees

IFT – Institute for Tourism Studies (1995) (Public)

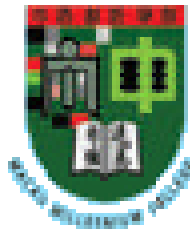


4. University of Macau (UM) and Macao HE System



*Portuguese Catholic University Degrees
Postgraduate level*

IIUM – Macao Inter-University Institute (1996) (Private)



Diplomas and Associate Degrees

Macao Millennium College (1999) (Private)



Diplomas and Bachelor in Nursing

Kiang Wu Nursing College (1999) (Private)



*Undergraduate and Postgraduate
Degree levels*

MUST - Macau University of Science and Technology (1999)
(Private)



5. Bologna Process and Its Implications to UM

Bologna Declaration – 6 main issues (1999)

1. Adoption of a **system** based mainly on **2 cycles**, and that is **articulated** at the **graduation level**.
2. Creation of a “**Credits**” system – **European Credit Transfer System – ECTS**.
3. Promotion of **European cooperation** related with **Quality** evaluation.
4. Adoption of a **Diploma System** easily legible and comparable - **Diploma Supplement**.
5. Promotion of the **Mobility**.
6. Promotion of the necessary **European Dimension** in Higher Education.



5. Bologna Process and Its Implications to UM

Berlin Communiqué – (September 2003)

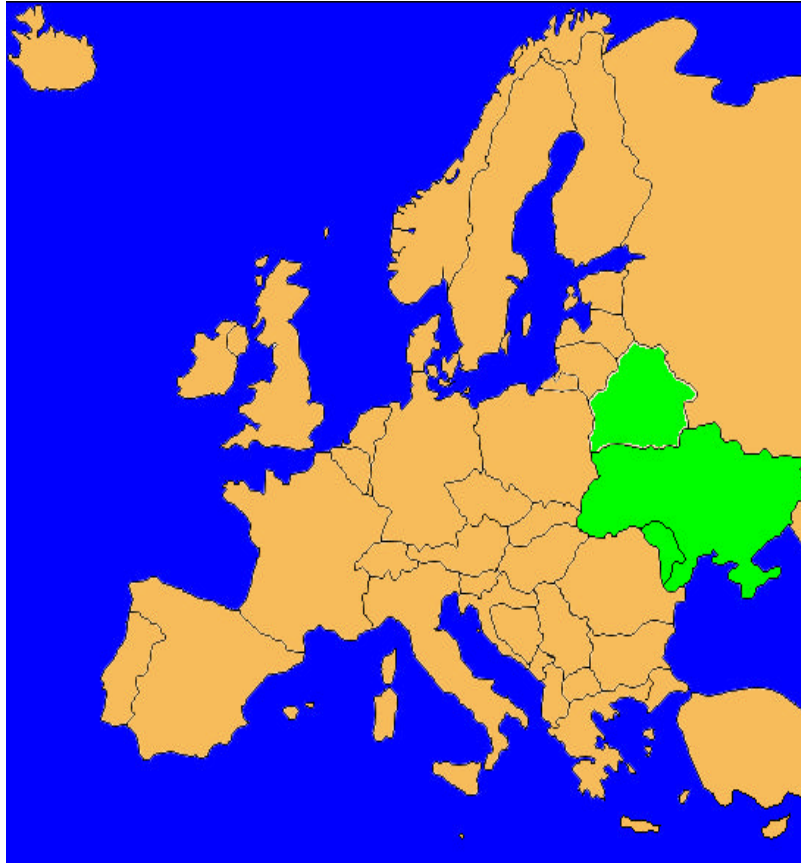
Priorities until the end of **2005**:

1. **ECTS** and **Diploma Supplement** in **fully implemented**.
2. To step-up **effective** use of the **2-tier** based **system**.
3. To **improve** the **recognition system** of degrees and periods of studies.
4. To develop **mutually shared criteria** and methodologies on **Quality Assessment** and promote good systems for **Quality Certification**.



5. Bologna Process and Its Implications to UM

Countries Signatory of the Bologna Declaration



- Albany
 - Germany
 - Andorra
 - Austria
 - Armenia
 - Azerbaijan
 - Belgium (Flemish and French Community)
 - Bosnia and Herzegovina
 - Bulgaria
 - Cyprus
 - Croatia
 - Denmark
 - Slovak
 - Slovenia
 - Spain
 - Estonia
 - Macedonian Republic
 - Russia Federation
 - Finland
 - France
 - Greece
 - Georgia
 - Netherlands
 - Hungary
 - Ireland
 - Iceland
 - Italy
 - Latvia
 - Liechtenstein
 - Lithuania
 - Luxemburg
 - Moldova
 - Norway
 - Poland
 - United Kingdom
 - Czech Republic
 - Romany
 - Holy See
 - Serbia and Montenegro
 - Sweden
 - Switzerland
 - Portugal
 - Turkey
 - Ukraine
- Recent members

Source: Portuguese Ministry of Science and Technology and Higher Education



5. Bologna Process and Its Implications to UM

Secondary Formation (Number of years)

12-years (Form 6)

Austria

Belgium

France

Spain

Portugal

Romania

13-years (Form 7)

Germany

Denmark

Finland

Norway

Sweden

United Kingdom

Check Republic

Estonia

Slovak

Italy

Malta



5. Bologna Process and Its Implications to UM

National Dispositions

Study architecture based on **3-degrees**

Bachelor

Master

PhD

1. A comprehensive credit system allowing easy **accumulation (capitalized credits)** and **transfer** called European Credits Transfer System **«ECTS»**.
2. Creation of a **Descriptive Annex** to the **Diploma "Supplement Diploma"**, aiming to assure the **legibility** of the **knowledge** and **acquired competences**.

5. Bologna Process and Its Implications to UM

Process description

Academic Year Duration:

Annual 36-40weeks or Semestral 18-20weeks

Total expected working hours per student:

40-45 hours (week)

1600-1800 hours (year)

8000-9000 hours (degree/5-years)

60 ECTS/year – 1 ECTS correspond to 26 to 30 hours of work/week



5. Bologna Process and Its Implications to UM

Consequences on the European HE System

Modification of the formation **structure**

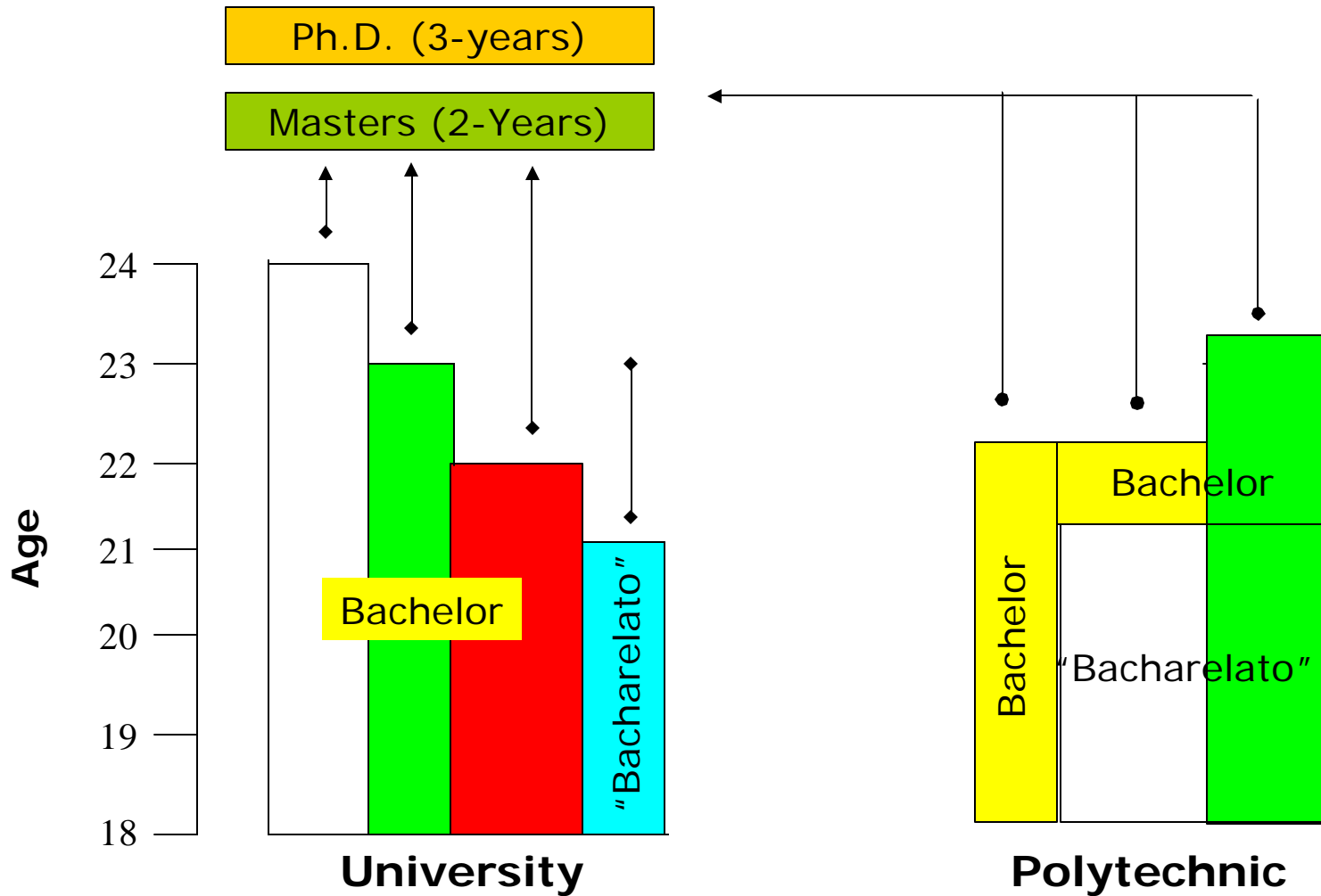
Renewal of the **pedagogic methods**

Improvement on **students' attendance** and **welfare conditions**

Evolution of **evaluation** and **classification** procedures



5. Bologna Process and Its Implications to UM



Current Portuguese HE System



5. Bologna Process and Its Implications to UM

Future Portuguese HE System (according with Bologna)

ECTS - Credits

Ph.D.

300

PROFESSIONAL RESEARCH
(POST – GRADUATE Level)

Diploma

Master

180/240

UNDER-GRADUATE Level
PROFESSIONAL
FORMATION

Diploma

Bachelor

120

SECONDARY Level



5. Bologna Process and Its Implications to UM

3 Possible *Options* for Implementation:

Option 1: ^{[1st+2nd] cycles} [5+0] **300** ECTS Credits

Advantages: Degrees easily recognized by professional organizations, curriculum reform easier, adaptation to new system cheaper, adaptation academic staff easier.

Disadvantages: Eliminates 1st cycle – against Bologna and bad for labour market, complicates student mobility in the country and Europe, reduces competitiveness of institution by reducing offers, difficult insertion in Europe.

Option 2: [4+1] **240+60** ECTS Credits

Advantages: Anticipation of entrance in labour market, more competitiveness and higher parallelism with Europe, higher stability 1stcycle curricula, more quality and versatility in the 2ndcycle, reduces formation costs, easier accreditation procedure.

Disadvantages: Significant change in current formation system, difficulties of academic staff adaptation, reduction of quality in Basic Sciences formation in 1stcycle, eventual students decrease in 2ndcycle, uncertainty of 2ndcycle financing.

Option 3: [3+2] **180+120** ECTS Credits

Advantages: Increases student mobility in Europe, anticipates professional life, more attractive because of easier formation, easier articulation with post-secondary formation, reduces formation costs.

Disadvantages: Same as Option 2, + difficult recognition by professional orgs.



5. Bologna Process and Its Implications to UM

UM Present System:

Reformed after the acquisition of UEA by the Macao Government back in 1988/1999 and transformed into **4-years Bachelor**, **2-years Masters** and **3-years Ph.D.**

Exception: Bachelor of Law (Portuguese) still maintains the **5-years degree**, like in Portugal. Bachelor of Law (Chinese) already with 4-years.

Similar to Option 2 (Bologna) presented before but was necessary to **compress 5-years into 4-years** in order that most of the programs could be **recognized by the CRUP and Portuguese Ministry of Education** back in **1995**. *High-Pressure over students with excess number of credits.*

Special Panels of Examiners were created by the **CRUP** in different areas to **analyze** and **recognize academically** the different **Bachelor** and also **Master** programs of UM. Only the Chinese language programs were left-out of the recognition process.

Later university structure and academic programs were analyzed again in detail through **UM Self-Evaluation** process (**1999**) under the guidelines of **CRUP** and the **Portuguese Foundation of Universities (FUP)**.



5. Bologna Process and Its Implications to UM

UM Future System (after reform):

Reform of UM in progress (to be completed this academic year) with the definition of a new **Legal Framework** including **New: UM Law, UM Charter, UM Personal Charter** and **UM Regulations** (first-time after the creation of Macao SAR).

Objectives: **Higher-Autonomy in Academic, Administrative and Financial areas** in order to **increase the potential for higher international competitiveness**. *Will include reform of academic programs.*

To maintain international recognition and the quality of academic programs UM will follow soon a **process of accreditation** based on the guidelines defined by **GAES** and **Hong Kong Council for Academic Accreditation (HKCAA)**.

Revision of academic programs in line with **Bologna** and other international standards, following a **2-cycle structure [Option 2: 4+2]** under the **ECTS system**. *Relaxing number of credits presently demanded.*

Process of **adaptation to Bologna** recommendations much **easier than in Portugal**. Also, **UM system highly compatible** with **China, Taiwan** and **USA**. *Implies already high mobility to UM graduates.*

