# **Current Situation & Development of UM**

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15 June 2020



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#### Challenges

### **Novel Coronavirus Pneumonia**

- Launching various preventive measures in line with the SAR government's arrangement, prioritising the health and safety of staff and students
- Actively responding to the pandemic, ensuring the orderly continuation of teaching and research
- **Providing community services:** psychological counseling, training for local SMEs, etc.
- Accumulating experience for future transformation in higher education

Thank you for your understanding, cooperation, support and dedication during the anti-pandemic period!









#### **Opportunities**

### Vision of the New SAR Government

### Be innovative in the overall development of higher education

- Study the feasibility of enlarging the proportion of nonlocal students recruited by Macao higher institutions
- Gradually promote market-oriented development of higher education institutions

### Support scientific and technological innovation and industry-academia-research collaboration

- Support commercialization of research results; promote innovation
- Carry out interdisciplinary and cross-field research and teaching
- Increase the relevance of scientific and technological progress to economic growth

### Encourage universities to play an active role in community service

• Provide tailor-made training programmes for civil servants with universities' academic resources



- Continue to support the SAR government's policies and give full play to the advantages and functions of UM in teaching, research and community services
- Compile and implement the five-year development strategic plan

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### **RISE** Strategy to Enhance UM's Educational Standards

適切性 Relevance

影響力 Impact

• Rooted in Macao, integrated into the Greater Bay Area, and geared towards China and beyond

 Amplifying the university's societal significance and academic impact in the world

### 顯著性 **Significance** Cementing pursuit of its missions, giving full play to its strengths and features

卓越性 Excellence · Establishing a prestigious higher education hub, benchmarking with the world's top universities

Stay relevant, exert influence, increase significance and continue to pursue excellence



### 1. Academic Development

2. Research Development

3. Administrative Development



### **Enhance the Academic Structure**

Faculty of Arts and Humanities (FAH)	Faculty of Business Administration (FBA)	Faculty of Education (FED)	Faculty of Law (FLL)
Department of Chinese Language and Literature	Department of Accounting and Information	<ul> <li>Secondary Education - Chinese</li> <li>Secondary Education -</li> </ul>	<ul> <li>Department of Macao Legal Studies</li> <li>Department of Global</li> </ul>
Department of English	Management	English	Legal Studies
Department of Portuguese	Department of Finance and Business Economics	Primary Education	
Centre for Japanese Studies	Department of Management and	<ul> <li>Pre-primary Education</li> <li>Secondary Education – Ma</li> </ul>	
<b>Department of History</b>	Marketing	<b>Integrated Science with Sp</b>	ecialisation in Biology
Department of Philosophy and Religious Studies	Department of Integrated Resort and Tourism Management	<ul> <li>Integrated Science with Specialisation in Chemistry</li> <li>Integrated Science with Specialisation in Physics</li> </ul>	

### **Enhance the Academic Structure**

Faculty of Social Sciences (FSS)

- Department of Communication
- Department of Economics
- Department of Government and Public Administration
- Department of Psychology
- Department of Sociology

Faculty of Health Sciences (FHS)

- Biomedical Sciences –
   Medicinal Science
- Biomedical Sciences –
   Pharmaceutical Science
- **Bioinformatics**

Faculty of Science and Technology (FST)

Department of Civil and Environmental Engineering

- Department of Computer and Information Science
- Department of Electrical and Computer Engineering
- Department of Electromechanical
  - Engineering
- Department of Mathematics
- **Department of Physics and Chemistry**

### **Enhance Degree Programmes to Meet Societal Needs**

#### **Continued Enhancement**

Reviewed and revised 27 bachelor's degree programmes and 33 postgraduate programmes

#### New Programmes in 2021/2022

#### **Doctoral:**

- Applied Doctor of Public Administration (DPA)
- Doctor of Education (EdD)

#### Master's:

- MPhil in Microelectronics
- MSc in Microelectronic
- MSc in Financial Technology

#### New Programmes in 2019/2020

#### **Bachelor's:**

- Bachelor of Education (Integrated Science)
- BSc in Applied Physics and Chemistry
- BSc in Business Intelligence and Data Analytics
- BSc in Bioinformatics
- BSc in Mathematics (Statistics and Data Science Stream)

#### Master's:

- MA in Chinese History and Culture
- Executive Master of Business Administration (EMBA)

MSc in Data Sci

#### **Doctoral:**

• Doctor of Business Administration (DBA)

ence	AI Applications	Second Language Studies
	Data Strategy & Compliance	Financial Technology
	Big Data & Analytics in Marketing	Precision Medicine
	Intelligent Education	

### **Undergraduate Education: 4-in-1 Educational Model**



### **Postgraduate Education:** Focus on Improving Quality

#### **Education for Master's students**

#### Market-oriented

- Take initiatives to serve the strategic needs of national, industrial and societal development
- Give equal emphasis on research and application so as to improve the effectiveness of talent nurturing



#### **Education for doctoral students**

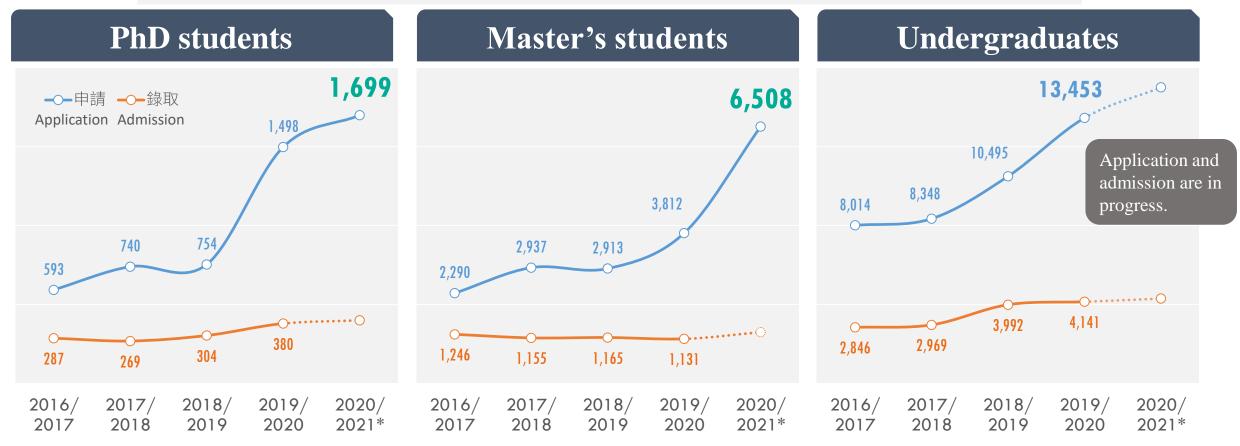
#### **Research-oriented**

- Support research in key research areas
- Improve scholarship schemes for talent nurturing

- UM PhD Scholarship
- PhD Assistantship

### **Develop the Scale of the University**

The number of applicants has increased yearly, and the number of graduate applicants this year reached a record high.

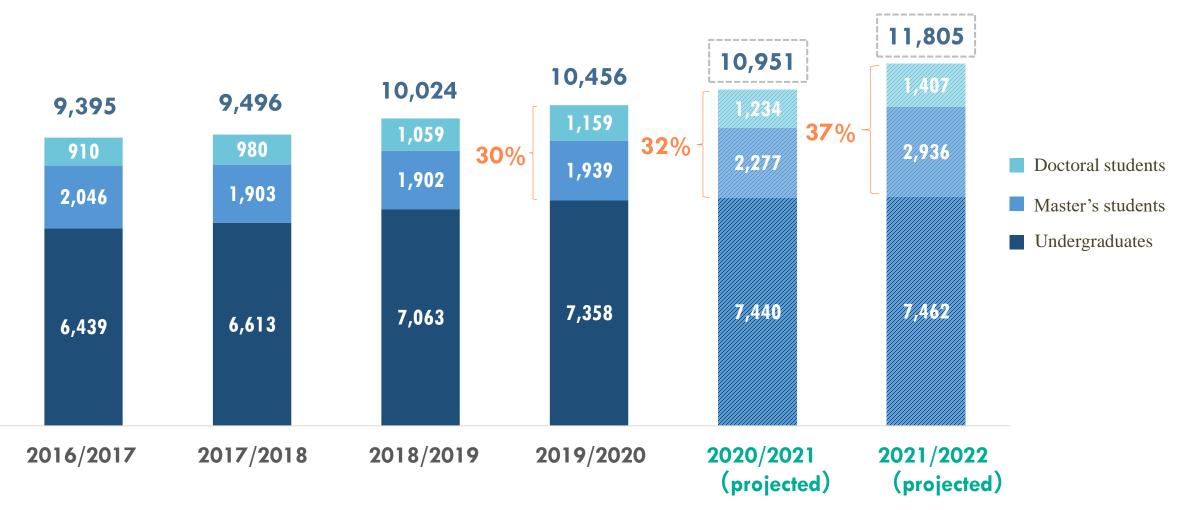


\* 1) Postgraduate admissions as of 27 April 2020

2) Undergraduate figures as of 15 May 2020, including applicants via 3 admission channels, namely, the Principals' Recommended Admission, the Admission Examination and the Direct Admission. The admission number is that of the Principals' Recommended Admission. The admission process of the Admission Examination is still underway. The Direct Admission is going on and its application deadline is 15 May. The application period for mainland students is from 1 June to 27 July.

### **Future:** Appropriate Increase in Student Population

- Increase the number of students
- Adjust the ratio of undergraduates to postgraduates (for a higher proportion of postgraduates)



#### Support SAR Government's Talent Nurturing Policies

#### **Chinese-Portuguese Bilinguals**

- Jointly nurture Chinese-Portuguese bilinguals holding doctoral degrees
- Chinese-Portuguese Bilingual Teaching and Training Centre/ Confucius Institute/ Faculty of Law

**BA in Portuguese Studies**: the Study Abroad Programme that enables Year 3 students to study abroad in Portugal or Brazil was extended from 1 semester to 1 year in academic year 2019/2020

**Bachelor of Law (conducted in Chinese and Portuguese)**: eligible students may study abroad in Portugal in Year 2

#### **Tourism and management executives**

- Nurturing tourism executives: Department of Integrated Resort and Tourism Management
- Conducting research on smart tourism and gaming

### Multiple measures to nurture high-calibre talents in:

- **Public administration**: DPA
- Senior management: DBA, EMBA, EdD
- Research:
  - UM Macao Talent Programme
  - Joint postdoctoral training programme

### Support SAR Government's Talent Nurturing Policies

Participate in, support and implement SAR government's senior civil servant training programme

- Establish a senior civil servant training centre
- Start by offering leadership training and specialised courses to different levels of civil servants, which are planned to be launched in 2020
- Offer applied Doctor of Public Administration (DPA)



**Promote 'Love China, Love Macao' education and traditional Chinese culture** 

- Centre for Constitutional Law and Basic Law Studies
- Centre for Chinese History and Culture/ Chinese history and culture base
- Confucius Institute

Better continuing education courses to meet the society's developmental needs

- Provide training for SMEs during the pandemic
- Offer various advanced training/courses in line with social development

### **Promote Joint Degree Programmes**







UNIVERSITY OF



SCIENTIA

HE UNIVERSITY EDINBURGH

#### **Partners**

- **Tsinghua University** joint postdoctoral training programme
- **Zhejiang University** '2+4'
- South China University of Technology '2+2'
- **Temple University (US)** '3+2'
- University of Toronto (Canada) '4+X'
- Imperial College London, University of Edinburgh, University of Bristol – '1+3'
- University of Bath



### Partnership to be established

- Queen's University Belfast
- Nova University of Lisbon





University of BRISTOL

### Foster Exchange and Cooperation with Mainland China

#### Active participation in alliances in Greater Bay Area (GBA)

- Guangdong-Hong Kong-Macao University Alliance
- Alliance for Technological Innovation and Talent Development in Western GBA

**Continue to strengthen and diversify cooperation with mainland tertiary institutions** 



Enhance partnership in humanities and social sciences; establish joint scientific centre for public administration



Tsinghua University

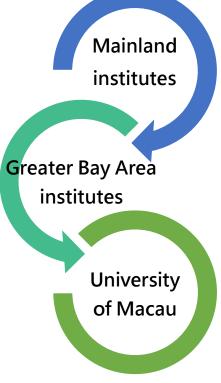
University

Peking

Joint postdoctoral training programmes

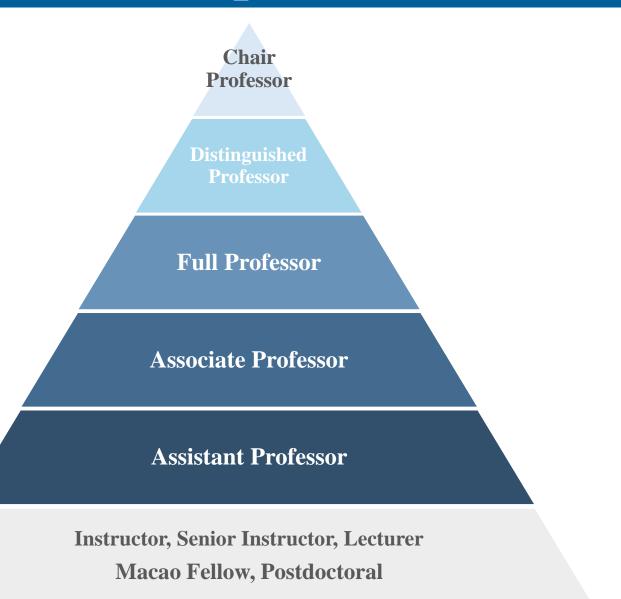


Zhejiang University Establish joint research centres in financial innovation and smart governance



### **Academic Staff Development**

- Improve the incentive mechanism to enhance the calibre of talent and scientific research capabilities of UM
- Establish a layered assessment indicator system for academic personnel development





### 1. Academic Development

### 2. Research Development

### 3. Administrative Development



### **Research Strategy: PICK**

#### **Problem Orientation**

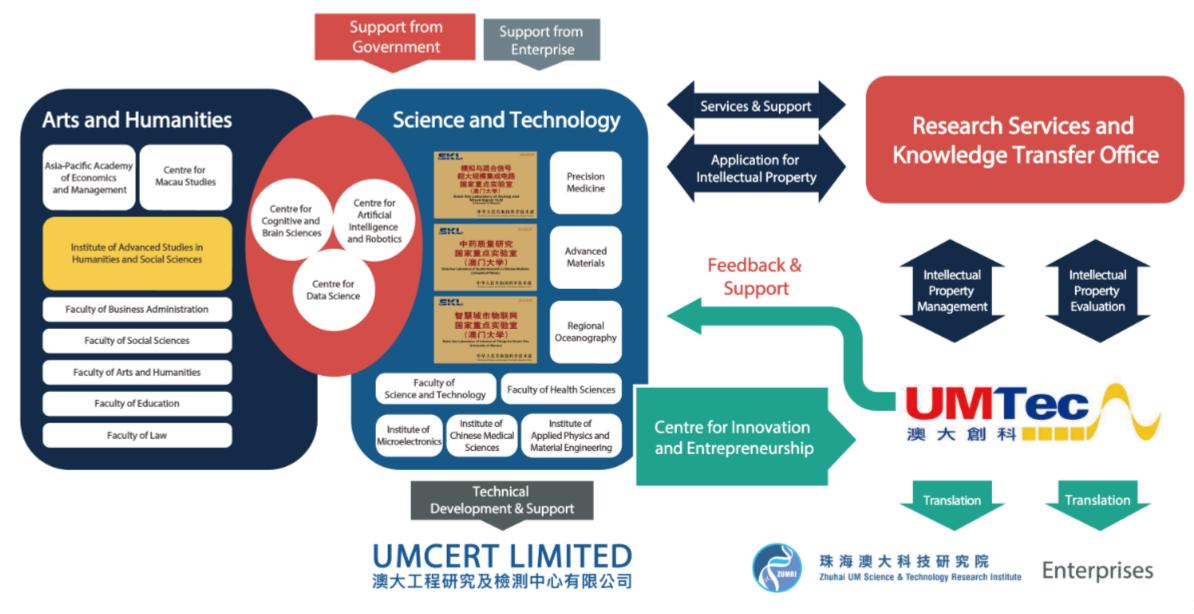
#### Interdisciplinary Partnership

#### **C**ollaborative Innovation

#### Knowledge Translation

- Conduct research on global, regional and local frontier challenges to serve the community.
- Integrate knowledge of various fields through interdisciplinary partnership to solve complex frontier challenges.
- Create an open, cooperative and resource-sharing innovative model which brings out individual capabilities to complement each other. Collaborative innovation can enhance the quality and impact of research, and accelerate technological innovation and industrialisation of scientific and technological achievements.
- Achieve technological innovation as well as knowledge and technology transfer through strategic partners and industry-university-research collaborations.

#### **UM System of Scientific and Technological Innovation and Transfer**



#### **Inauguration of the Institute of Advanced Studies in Humanities and Social Sciences**



- Initiated operation of office
- Launched official webpage

#### https://ias.um.edu.mo/?lang=en

• Visiting scholars granted with support will start their programmes in the fourth quarter of this year

#### **Fellowship Scheme**

- Regular staff
- Signature Research Cluster Projects
- Visiting scholars

#### Signature Research Clusters

Chinese culture in diverse cultural environment

New opportunities at the intersection of arts and sciences

Macao in global perspective



#### Excellent Publication Scheme

Encourage academic staff
 to publish their specialised
 research outcomes



### **Progressively Build up Research Platforms**

#### **Centre for Regional Oceans**

- **Inaugurated:** promote UM research in regional oceans
- laboratory fitting-out works, and the procurement, installation and commissioning of large equipment

#### **Centre for Cognitive and Brain Sciences**

• The installation and commissioning of core research facilities to support various research programmes

#### **Centre for Data Science**

• The Macao branch of the Intelligent Computing Platform









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#### **Boost Industry-academia-research Development and Technology Transfer**

Industry-academia-research service platform

• Establish UMCERT Engineering Research and Testing Ltd.: provide specialised services in engineering quality and testing

Industry-academia-research nurturing platform

National Co-working Space





Industry-academia-research implementation platform



- Move in mature projects in smart cities, advanced materials and microelectronics for research and collaboration on commercialisation of the research results
- Prepare for the phase 2 construction of the Zhuhai UM Science & Technology Research

Institute: Chinese medicine and translational medicine



Establish a foothold in the Traditional Chinese Medicine Science and Technology Industrial Park of Cooperation between Guangdong and Macao





### **Coordinated Collaboration between UM and Chinese Academy** of Sciences (CAS)

### Five established joint laboratories

Joint Research Laboratory of Brain and Cognitive Sciences Joint Laboratory of Artificial Intelligence and Robotics Joint Laboratory of Aerospace Information Joint Laboratory of Marine Environment and Ocean Engineering Joint Laboratory of Cancer Research 



Deepen collaboration and elevate it to the university level for integrated planning and management

### Goal

(UM-CAS) Macao Institute of Scientific and Technological Innovation



## Academic Development Research Development

### 3. Administrative Development



### **Enhance Budget Management and Execution to Support the Teaching and Research Development of UM**





Enhance administrative management

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- Restore the Internal Audit Office
- Set quarterly budget execution indexes
- Strengthen monitoring of procurement project tendering
- Promote the application of epayment





Enhance research support

- **Refine the research project management system:** incorporate both internal and external research projects; enable online application for and evaluation of the UM Macao Talent Programme
- Enhance the Laboratory Equipment Information Management System: build a comprehensive online registration and enquiry system for large equipment
- Improve management of laboratory facilities and consumables



### **Continue Campus Construction and Development**

Fitting-out works for Staff Quarters & construction of laboratories





Enhance guest services (Guest House)





Construct and optimise student dormitories (W31, W32)







### **2021** 40<sup>th</sup> Anniversary of UM

### Leverage alumni connections to support UM development

- Invite alumni and alumni associations to return to the campus to join anniversary celebrations
- Explore different social networking platforms to release UM information

#### **Promote UM brand, tell UM stories well**

- Plan a series of anniversary promotional materials featuring campus culture, image and spirit of UM
- Promote UM stories and produce an anniversary short video series





