

# State and Outlook of the University of Macau

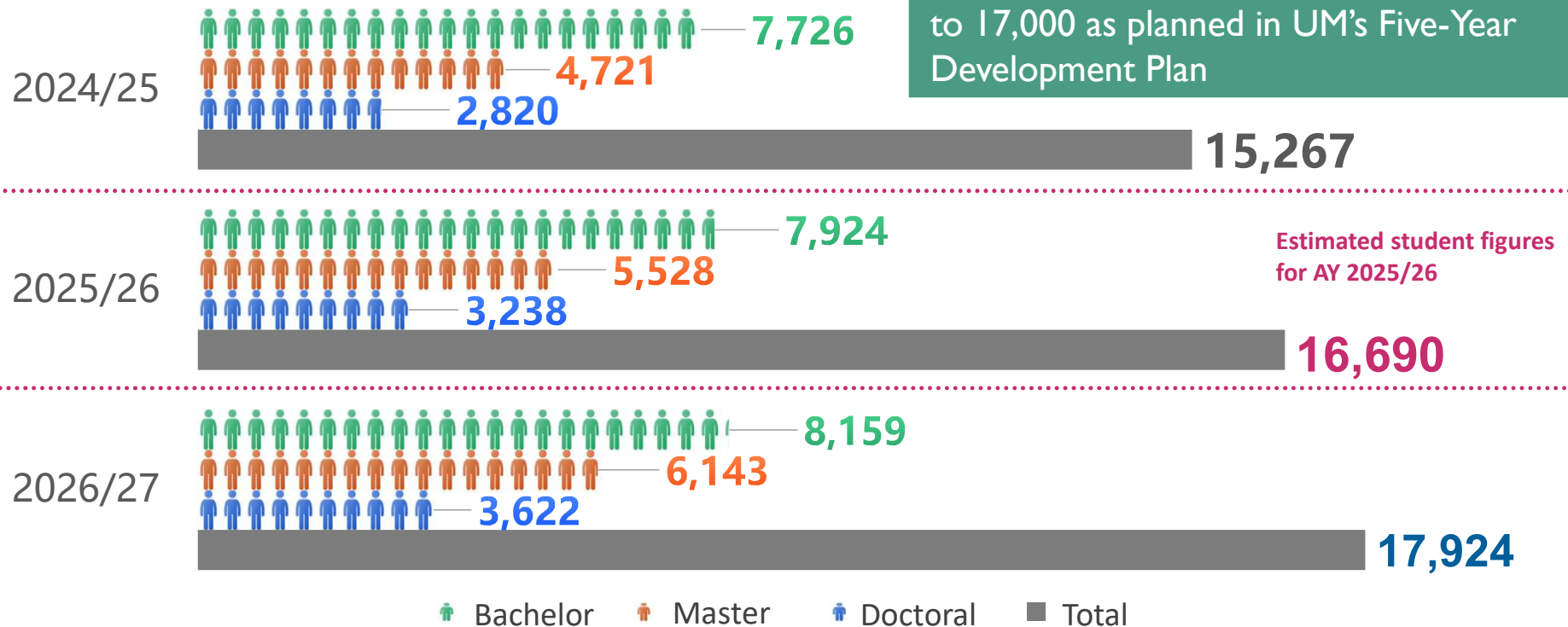
**Prof. Yonghua Song**  
**Rector**

- 1 Academic Affairs**
- 2 Research Development**
- 3 Global Affairs**
- 4 Student Affairs**
- 5 Administration**
- 6 Cross-border Education**
- 7 Strategy and Planning**



# An Expanding Student Body

Continuing to expand the student size up to 17,000 as planned in UM's Five-Year Development Plan



# UM's Talents Nurturing System

**P.I.C.K. Strategy:**  
Disciplinary Integration,  
Collaborative Innovation

To create new  
knowledge and  
research outcomes via  
open and collaborative  
innovation

**PhDs**

Subject  
Refinement

Inter-disciplinary  
Cross-disciplinary  
Multi-disciplinary

**Master's**

Discipline  
-specific  
Education  
General  
Education

**4-in-1  
Education**

Research &  
Internship  
Education

Community  
& Peer Education

**Bachelors**

**4-in-1 Whole Person  
Education**

**UM Motto**

Humanity, Integrity, Propriety, Wisdom, Sincerity

**Ideas**

**Practice**

Collaborative  
Innovation

UM – ICI

Knowledge  
Integration

Whole-  
person  
Education

10 RCs

# Disciplines and Curriculum Development

## New programmes in AY2025/26

- Master of Design in **Visual Communication Design**
- Master of Science in **Fire Safety and Disaster Response**
- Doctor of Design in **Visual Communication Design**
- Doctor of Philosophy in **Brain and Cognitive Sciences**



## Expected to launch in AY2026/27 and 2027/28

- Master of Philosophy in **Pharmaceutical Sciences**
- Master of Science in **Artificial Intelligence and Education**
- Master of Science in **Smart Power Grid**
- Master of Law in **Law and Technology**
- Master and Doctor of Design in **Industrial Design**

## Enhancing the GE curriculum

- Introducing new courses related to **AI and climate change**.
- To review compulsory courses: 'Macao and the Chinese Civilisation in a Global Context' and 'Law and Society'.
- To establish a General Education Teaching Award.

# Nurturing Talents Needed for Social Development

## Training governance professionals for the SAR Government

**Public Administration Training Centre:** enhancing systematic training that combines theory and practice.

## Strengthening the construction of Science and Innovation Education Base

### **UM Macao Base for Primary & Secondary STEM Education:**

strengthening and carrying out research on science popularization with distinguishing features of Macao and facilitating the development of a Sino-Portuguese platform for science popularization.

## Cultivating high-level tourism management professionals

Implementing the educational concept of “**UM Tourism+**”.

## Nurturing Chinese and Portuguese bilingual talents

### **Chinese-Portuguese Bilingual Teaching and Training Centre:**

nurturing bilingual talents, producing teaching materials in Chinese and Portuguese, and bringing traditional Chinese culture to the Portuguese-speaking countries.

## Providing high quality programmes to the community

**Centre for Continuing Education:** providing high quality programmes to the community, and meeting the needs of government departments, organizations and industries.

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# Research Strategy: **PICK**

## **P**roblem Orientation



Conduct research on global, regional and local frontier challenges to serve the community.

## **I**nterdisciplinary Partnership



Integrate knowledge of various fields through interdisciplinary partnership to solve complex frontier challenges.

## **C**ollaborative Innovation



Create an open, cooperative and resource-sharing innovative model which brings out individual capabilities to complement each other.

## **K**nowledge Translation



Achieve technological innovation as well as knowledge and technology transfer through strategic partners and industry-university-research collaborations.

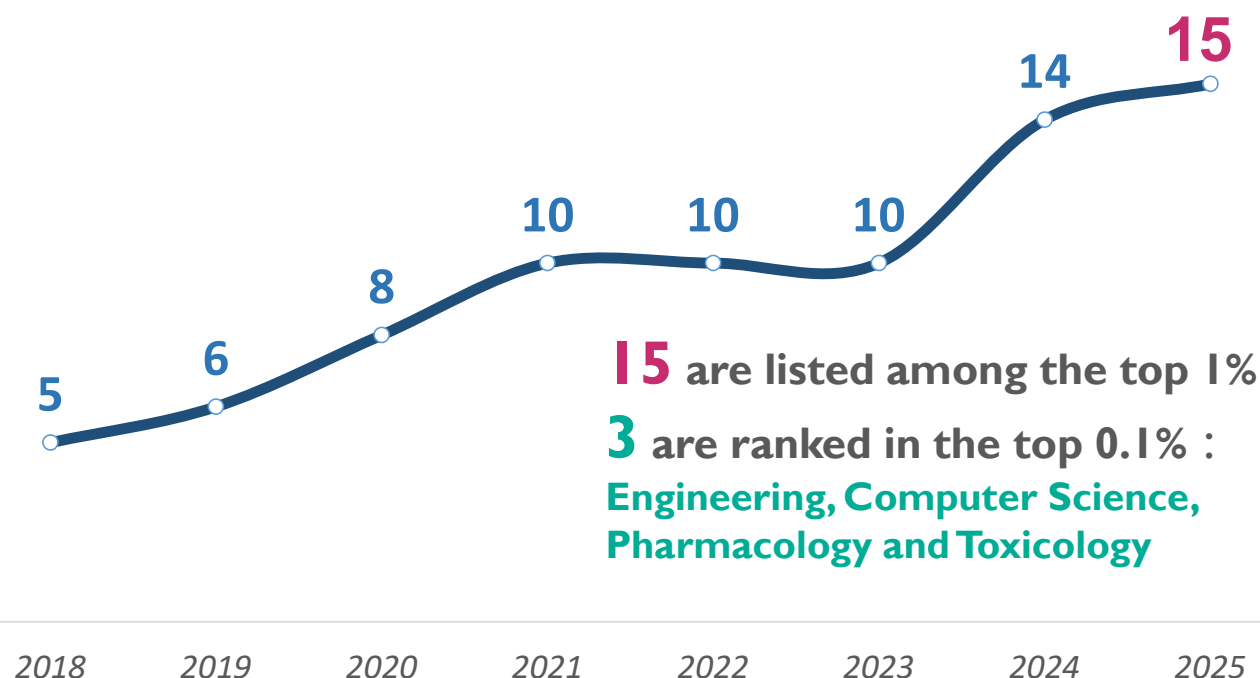


# UM System of Research and Knowledge Translation



# Continuously Improving Academic Quality

Number of UM academic disciplines listed among the  
Essential Science Indicators Database (ESI) top 1%



1. Engineering
  2. Material Science
  3. Computer Science
  4. Chemistry
  5. Pharmacology and Toxicology
  6. Clinical Medicine
  7. Psychiatry/Psychology
  8. Biology and Biochemistry
  9. Social Sciences, General
  10. Molecular Biology & Genetics
  11. Agricultural Sciences
  12. Economics & Business
  13. Environment/Ecology
  14. Geosciences
  15. Mathematics
- (by article citations)

# Promoting Research and Innovation in Key Areas

## Emerging scientific and innovation fields

### 01 Precision Medicine

- Research on the prevention and treatments of high-incidence cancers in Macao by integrating 7 major platforms and focusing on 4 major directions; working with hospitals to design precise and effective treatment plans so as to improve the level of GBA.

### 02 Advanced Materials

- Optoelectronic and electro-optical high-efficiency conversion materials, energy storage and catalytic energy materials, energy-saving, environmental and new functional materials, quantum information and micro-nano technology applications and quantum biomedical technology development.

### 03 Regional Ocean Research

- Promote the construction of marine environmental monitoring platforms and aim to deploy buoys in Macao waters for real-time monitoring

### 04 Stem Cell Applications

- Focus on stem cell research and applications plans to advance stem cell therapy applications in Macao and the Cooperation Zone.

## Interdisciplinary research areas in arts and sciences

### Artificial Intelligence and Robotics

(Strengthen the establishment of academic teams with international influence)

### Cognitive and Brain Sciences

(Launch PhD programme and MSc programme; establish joint laboratory with Institutes)

### Data Science

(Strengthen cooperation with the GBA)

## Humanities and Social Sciences

- Local research
- Research in the areas of Asian economy, financial innovation and smart tourism
- Academic research in the field of humanities and social sciences through subject integration

# Advancing Industry-academia-research Development

## Industry-academia-research cultivation platform

- Strengthen **parallel incubation services** with ZUMRI;
- Begin to connect with resources such as the **Sino-Portuguese bilingual innovation and entrepreneurship competition**, recommending more suitable start-up companies to participate in international innovation and entrepreneurship paths;
- Launch new comprehensive entrepreneurship foundation training: the **‘From 0 to 1’ series of courses**; launch pilot project: **‘From 1 to 2: Entrepreneurial Solutions’**;
- **‘UltiMater Entrepreneurship Competition’**

## Industry-academia-research implementation platform

### ZUMRI

- Promote the launch of application demonstration projects on the various R&D platforms at **Phase I**;
- Expedite the construction of the GMP and laboratories and the Animal Centre at **Phase II**;

### UM Advanced Research Institute in Hengqin

- Introduce high-quality teams and projects from UM;
- Introduce international and national full-time senior talents and quality research projects.

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# Deepening Collaboration with Portuguese-speaking Countries

Establish strategic partnerships with University of Lisbon (Portugal), University of Porto (Portugal) and University of Sao Paulo (Brazil) to promote substantive collaborations.

U LISBOA

UNIVERSIDADE  
DE LISBOA

U. PORTO



- Carry out the dual PhD degree programmes with the University of Lisbon (Portugal) and the University of Porto (Portugal);
- Discuss the establishment of joint PhD degree programmes with the University of Sao Paulo (Brazil);
- Discuss the establishment of 'China-Portuguese Speaking Countries Joint Ocean Research Centre' with the Laboratory for Robotics and Engineering Systems (LARSyS) of University of Lisbon and Laoshan Laboratory.



Host the '35<sup>th</sup> AULP Annual Meeting' in 2026





# Reinforcing Collaboration with English-speaking Countries



- Clare Hall at the University of Cambridge Visiting Fellowships Programme (UK).
  - Plan to sign a collaboration agreement with Oriel College at the University of Oxford (UK).
  - Continue participating in the Harvard-Yenching Institute Visiting Scholars Programme (US).
  - Established the dual master's degree programme in English studies with the University of Leeds (UK).
  - Established the dual bachelor's degree programme in tourism with Griffith University (Australia) (agreement under signing).
  - Hold discussions with the University of Technology Sydney and Macquarie University (Australia) to establish a dual PhD degree programme.
- Plan to visit Australia (Melbourne and Brisbane), Canada, and the USA (East Coast) to strengthen collaboration with local leading universities in fields such as **business administration, engineering, data science, and health sciences**.
  - Attended the **'NAFSA Annual Conference & Expo'** in May 2025 in the USA, to continue deepening international partnerships.

# Strengthening Collaboration with Neighbouring Countries

## Expanding International Student Recruitment towards Southeast Asian Countries

- Continue the student recruitment publicity in **Malaysia**;
- Strengthen academic cooperation with universities in **Vietnam**, broaden exchanges with local high schools, and explore the establishment of the 'Principals Recommended Admission Scheme';
- Provide the **International Student Scholarship**



## Participating in international education fairs and conferences

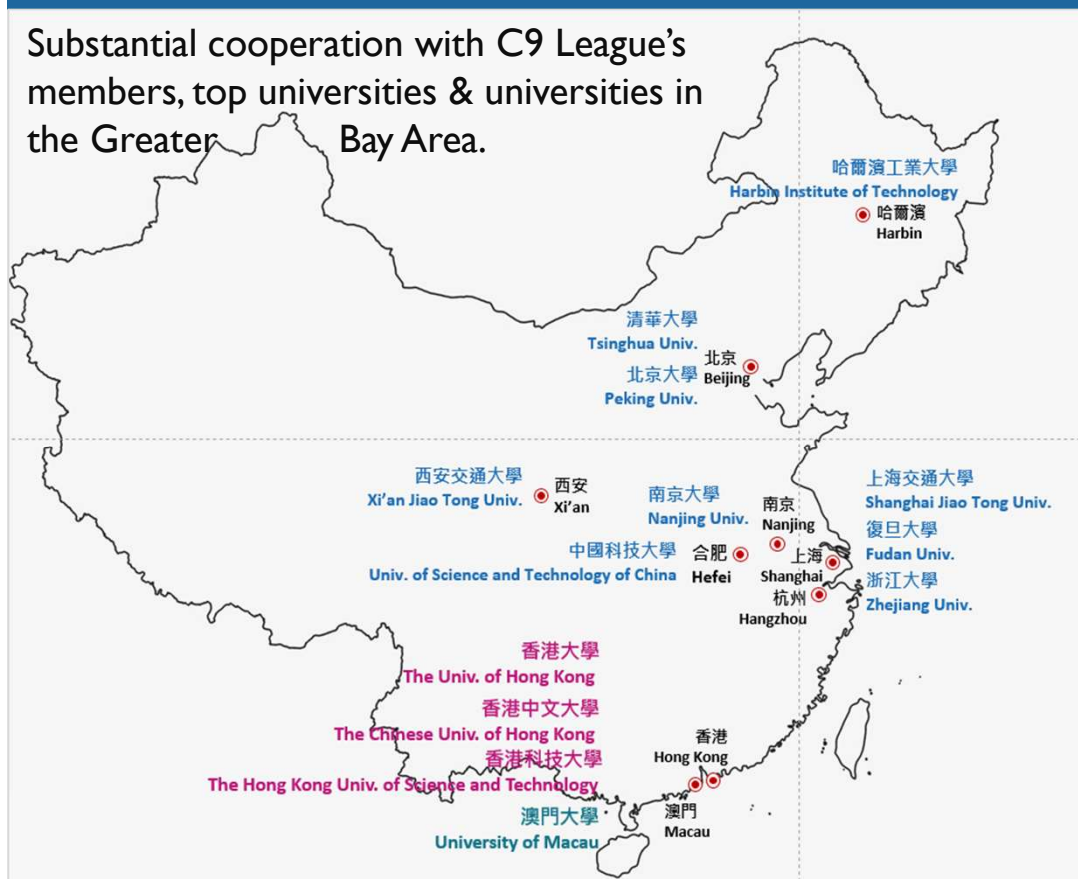


- Visit **Japan** (Osaka and surrounding cities) and participate in the 'Annual General Meeting and Board of Directors Meeting of The Association of East Asian Research Universities (**AEARU**)' in Japan, to enhance exchanges with research-oriented universities in East Asia";
- Attend the '2026 Asia-Pacific Association for International Education (**APAIE**) Conference & Exhibition'.



# Promoting Exchanges and Collaboration with the Mainland and Hong Kong SAR

Substantial cooperation with C9 League's members, top universities & universities in the Greater Bay Area.



## Promoting Joint Dual Degree Programmes with Top Mainland Universities

- |  |                                |
|--|--------------------------------|
| • Fudan University                     | • Zhejiang University          |
| • Xiamen University                    | • Nanjing University           |
| • South China University of Technology | • East China Normal University |
| • Sichuan University                   | • .....                        |

**C9+3+1**

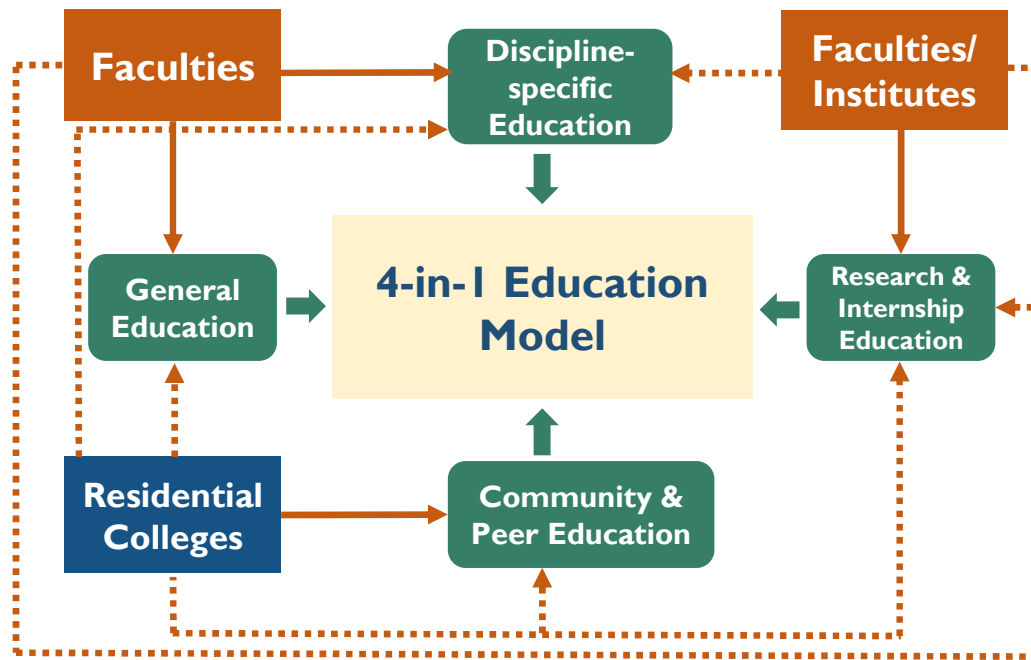


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# Whole-Person Education

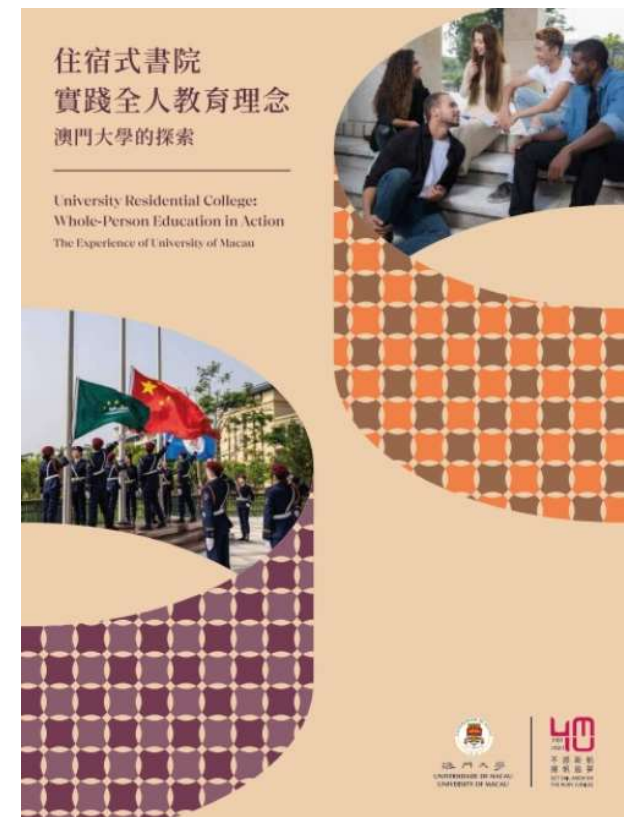
- To help students discover their potentials and abilities through our 4-in-1 model.
- To promote students' whole-person development by utilizing experiential teaching method via the RC's residence experiences and collaborative education of the faculties.



# RC Education

**RC Education** is aimed at nurturing university graduates with **seven competencies**:

- ✓ Citizenship
- ✓ Global competitiveness
- ✓ Knowledge integration capability
- ✓ Teamwork and collaboration
- ✓ Leadership and service
- ✓ Cultural engagement
- ✓ Healthy lifestyle



# Enhancing the RC Education

- 01 Further strengthening national security education to foster students' sense of national identity
- 02 Expanding exchanges and carrying forward cross-regional cooperation among universities
- 03 Offering personalised career planning services and encouraging students to integrate into the development of the country
- 04 Enhancing professional capabilities and pastoral care at the RCs

**“The RC Global Partnership Programme”**

- 05 Deepening collaboration between the RCs and faculties to support the learning and development of students

- 06 RC Education for Postgraduate Students Pilot Programme

To launch the ‘Residential College Education for Postgraduate Students Pilot Programme’ at SPC

- 07 Continually implementing the educational outcome survey to optimise the collaborative education model



曹光彪書院  
Colégio Chao Kuang Piu  
Chao Kuang Piu College



鄭裕彤書院  
Colégio Cheng Yu Tung  
Cheng Yu Tung College



張崑崙書院  
Colégio Cheong Chun Lun  
Cheong Chun Lun College



蔡繼有書院  
Colégio Choi Kai Yau  
Choi Kai Yau College



霍英東珍珠禧書院  
Colégio Dr. J. H. Hui & P. H. Hui  
Henry Fok Pearl Jubilee College



呂志和書院  
Colégio Li Chi Ho  
Li Chi Ho College



馬萬祺羅柏心書院  
Colégio Ma Man Kei & Lo Pak Sam  
Ma Man Kei and Lo Pak Sam College



滿珍紀念書院  
Colégio Memorial Moon Chun  
Moon Chun Memorial College



潘平權書院  
Colégio Poon Ping Kwan  
Poon Ping Kwan College



何鴻燊逸志書院  
Colégio Ho Yau Hui  
Stanley Ho Yau Hui College

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# Strengthening Human Resources Development

**Attract leading talents  
in specific fields**

**Recruit young scholars  
with high potential**

**Continue the  
implementation of the  
UMDF Named  
Professorship and the  
UMDF Professorial  
Fellowship**

**Academic  
Staff**

**Administrative  
Staff**

**Continuously optimize and  
improve the personnel  
system**

**Strengthen specialized  
training as well as patriotic  
& national education**

**Reform and implement the  
promotion system**



# Optimizing Administrative and Financial Management



## E-governance

- Facilitate the deployment of the Macao Public Service One Account.
- Optimize and promote the use of “Student Stipend System” and “Digital Expense Claims System”.
- Optimize the eProcurement system.

## Finance Management

- Optimize budget management and improve budget execution rates.
- Enhance personnel budgeting model.
- Conduct sampling inventory of assets.



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# Construction of a UM Campus in the Cooperation Zone in Hengqin

- **Construction period is expected to span from 2025 to 2028**
- **Carrying out key services** in compliance with laws and regulations upon entry into the design and construction phase, including cost control, design, project management, general contracting and supervision of the works, as well as surveying and mapping.
- **Formulating a ten-year Academic (Programme) plan (2026-2036)** and setting up bachelor's, master's, and doctoral degree programmes in the **Faculty of Medicine, Faculty of Information Science and Technology, Faculty of Design**, and the **Faculty of Engineering**.

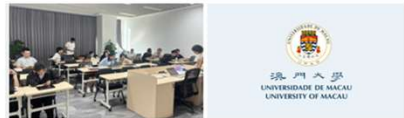


- ✓ Construction will take place from 2025 to 2028
- ✓ Occupancy inspections are scheduled to begin in 2028
- ✓ Trial operations are expected to commence in 2028
- ✓ The project will reach full completion in 2029

# Current Status of Interim Teaching Site

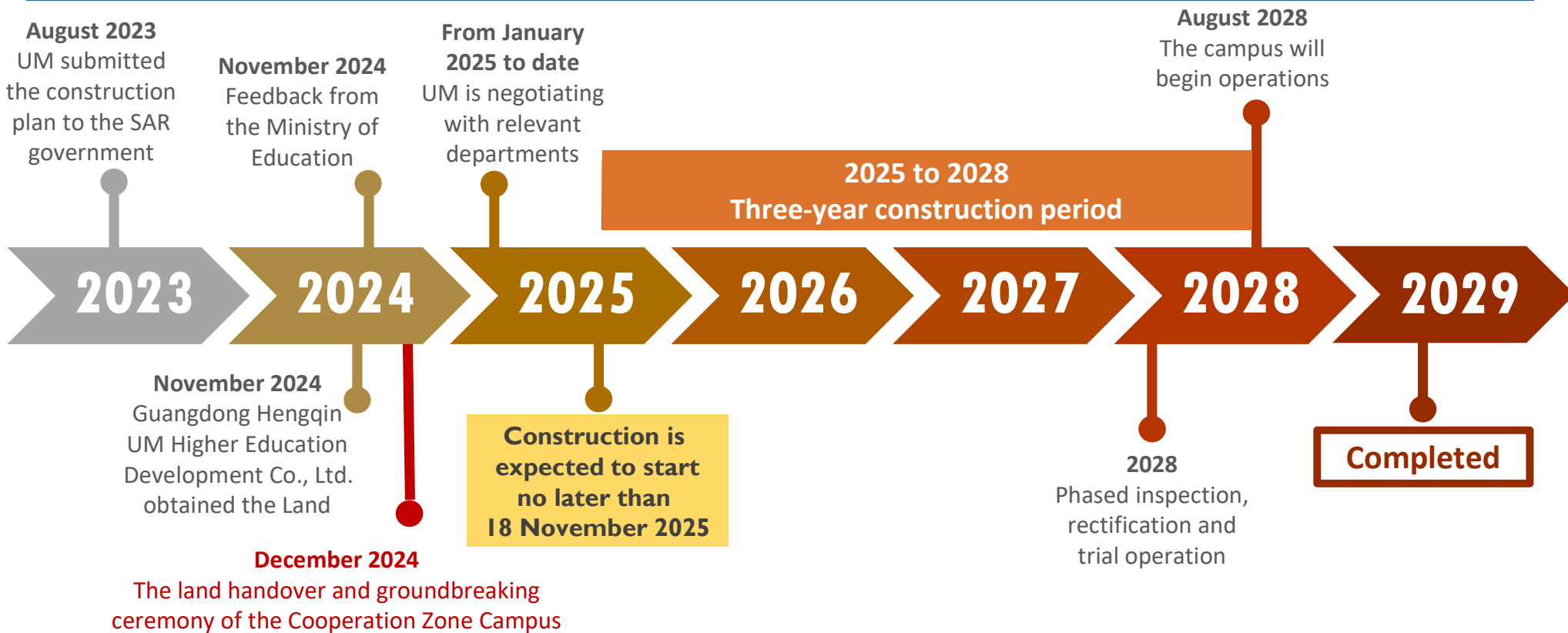


Set up a Science Education Base and Interim Teaching Site in 2024.



- Currently launching graduate courses in 6 majors: **Artificial Intelligence, Microelectronics, Finance, Data Science-FinTech, Data Science-Marketing Analysis, Business Analytics.**
- There will be around **400 students** in 2025/26.
- Established scientific research platforms in the fields of microelectronics, internet-of-things for smart city, artificial intelligence and robotics.

# Construction Timeline



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

## **Relevance**

Being rooted in Macao, participated in the construction of the Greater Bay Area, geared towards China and beyond

## **Impact**

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

## **Significance**

Cementing pursuit of its missions, giving full play to its strengths and features

## **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**

# Make UM's Working Environment Pleasant and Attractive

## UM's People Strategy

- The development and competition of universities boils down to the development and competition of talents
- Staffing is crucial for achieving the strategic goals of the university in the new era

**How to make our  
working environment  
pleasant for current staff ?**



**How to make it  
appealing to prospective  
staff ?**

**A**ppreciate

**A**gglomerate

**A**dvance

**A**ttract

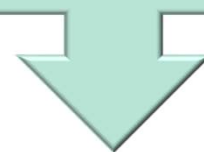
**A**ppropriate

# Commence the Formulation of UM's Next Five-year Development Plan



**The Five-Year Development Plan of the University of Macau (2021/22-2025/26)** was released on 23 Dec 2021. It serves as an outline and blueprint for the development of the university.

The process of formulating UM's Five-Year Development Plan (Academic Year 2026/27-2030/31) commenced in early 2025, marking the beginning of another strategic journey to shape the university's future.



- Coordinate 16 academic units in formulating their five-year development plans
- Conduct data collection and research analysis for preparation of the plan
- Collect opinions from internal units/departments/centres through various channels.



# The Position and Role of the University of Macau

立足澳門、共建灣區、融入國家、走向世界

Root in Macao



Participate in the  
Construction of the  
Greater Bay Area,  
Integrate into  
the Nation



Go Global



*Thank you*

