

## RESEARCH CENTRES AND LABORATORIES

**Laboratories**

The University continuously puts in resources to develop various laboratories according to the needs for course development, teaching and research. The various laboratories are listed as follows:

**List of Laboratories****Biomedical Sciences Laboratories**

- Animal Research Core
- Biological Imaging and Stem Cell Core
- Genomics, Bioinformatics and Single Cell Analysis Core
- Proteomics, Metabolomics and Drug Development Core

**CCBS Laboratories**

- Brain Intervention Core
- Cognition and Behavioral Data Collection Core
- High Performance Computing Facility
- Institute of Biophysics of Chinese Academy of Sciences – University of Macau Joint Research Laboratory of Brain and Cognitive Sciences
- Neuroimaging Core

**Guangdong-Hong Kong-Macao Joint Laboratories**

- Guangdong-Hong Kong-Macao Joint Laboratory for Smart Cities
- Guangdong-Hong Kong-Macao Joint Laboratory of Human-Machine Intelligence-Synergy Systems
- Guangdong-Hong Kong-Macao Joint Laboratory of Photoelectromagnetic Functional Materials
- Guangdong-Hong Kong-Macao Photonic-Thermal-Electrical Energy Materials and Devices Joint Laboratory
- Guangdong-Hong Kong-Macao Neutron Scattering Science and Technology Joint Laboratory
- Guangdong-Macao Joint Laboratory of Advanced and Intelligent Computing

**Ministry of Education Joint Key Laboratory**

- Sun Yat-Sen University – University of Macau Ministry of Education Joint Key Laboratory

**State Key Laboratories**

- The State Key Laboratory of Analog and Mixed-Signal VLSI (University of Macau)
- The State Key Laboratory of Internet of Things for Smart City (University of Macau)
- The State Key Laboratory of Quality Research in Chinese Medicine (University of Macau)

---

## **University of Macau - Chinese Academy of Sciences Joint Laboratories**

- Joint Laboratory of Aerospace Information
- Joint Laboratory of Artificial Intelligence and Robotics
- Joint Laboratory of Ocean Environment and Engineering

## **University of Macau – BoardWare Macau Joint Laboratory**

## **University of Macau – Huafa Group Joint Laboratory**

### **Science and Technology Laboratories**

- Advanced Physics Laboratory
- Analog Electronics Laboratory
- Antenna and Electromagnetic-Wave Laboratory
- Automation Laboratory
- Automotive Engineering Laboratory
- Big Data Processing Laboratory
- Biomedical Engineering Laboratory
- Biomedical Imaging Laboratory
- Chemistry Laboratory
- Clean Room
- Cloud Computing and Distributed Systems Laboratory
- Computational Engineering Laboratory
- Computer Aided Civil Engineering Facilities
- Computer Graphics and Multimedia Laboratory
- Control Laboratory
- Construction Materials Laboratory
- Corrosion & Metallography Laboratory
- Crystal Growth and Atomic Force Microscopy Laboratory
- Crystal Structure Laboratory
- Data Analytics and Collaborative Computing (DACC) Laboratory
- Data-Driven Intelligent Systems Laboratory
- Distributed Systems Laboratory
- Dynamics and Monitoring Laboratory
- E-Commerce Technology Laboratory
- E-Home Healthcare Engineering Laboratory
- Electric Power Engineering Laboratory
- Electrical Machines and Drives Laboratory
- Electricity Utilization Laboratory
- Electron Microscopes Laboratory
- Electronics Workshop
- Embedded Systems Laboratory
- Environmental Biotechnology Laboratory
- Environmental Engineering Laboratory
- General Physics Laboratory
- Geomechanics Laboratory
- Geo-modelling & Wave Laboratory
- Geotechnical Engineering Laboratory
- Green Energy Materials Laboratory
- Hydraulics Laboratory
- Image Processing and Pattern Recognition Laboratory
- Industrial Engineering Laboratory
- Innovative Design and Integrated Manufacturing Laboratory

- Inorganic/Organic Engineering Material Laboratory
- Knowledge and Data Engineering Laboratory
- Laboratory for Ocean and Atmospheric Research
- Laboratory for Ocean Environmental Pollution Analysis and Assessment
- Laboratory for Ocean Environmental Pollution Prevention and Remediation
- Laboratory for Ocean Environmental Simulation and Modelling
- Laser and Optics Laboratory
- Laser Processing Laboratory
- Machine Workshop
- Mathematics Laboratory 1
- Mathematics Laboratory 2
- Measurement and Instrumentation Laboratory
- Mechanical Characterisation and Testing Laboratory
- Mechatronics Laboratory
- Metallography Laboratory
- Microscopy Laboratory
- Motion Capture Laboratory
- Natural Language Processing & Portuguese-Chinese Machine Translation Laboratory (NLP<sup>2</sup>CT)
- Physical Properties Measurement Laboratory
- Quantum Device Fabrication/Testing Laboratory
- Raman Spectroscopy Laboratory
- Scanning Electron Microscope (SEM) Laboratory
- Sensor-based Cooperative Robotics Laboratory
- Sensor Network and Communication Laboratory
- Signal Processing and Communication Laboratory
- Smart and Micro/Nano Systems Laboratory
- Smart Environment & Cybernetics System Laboratory
- Smart Grid Laboratory
- Soft Sensors-Actuators-Robots Laboratory
- Solar Energy Laboratory
- Spectroscopy Laboratory
- Stochastic Mechanics Laboratory
- Strength of Materials Laboratory
- Structures Laboratory
- Surveying Laboratory
- Thermal Engineering Laboratory
- Thin-Walled Structure Laboratory
- Transportation Engineering Laboratory
- Tribology Laboratory
- Ultrafast Laser Laboratory
- Vision and Image Processing Laboratory
- Visual Information Processing Laboratory
- Wireless Communication Laboratory
- X-ray Diffraction Laboratory
- X-ray Photoelectron Spectroscopy Laboratory

#### **Other Laboratories**

- Accounting and Information Management Laboratory I
- Black Box Theatre
- Cognitive Studies Laboratory
- Conference Room/SI Lab
- Creative Media Lab
- Currency Museum
- Exhibition Room

- 
- Finance and Economics Laboratory
  - Hospitality Laboratory
  - ISCG Gaming Laboratory
  - Kinesiology Laboratory
  - Linguistics Laboratory
  - MICE Laboratory
  - Mock Hotel Room
  - Science Laboratory
  - Thomson Reuters Trading Room