

**SENARAI BIDANG DAN SUB BIDANG PENGAJIAN
BIASISWA YANG DI-PERTUAN AGONG (BYDPA) TAHUN 2024**

A) Sains, Teknologi, Kejuruteraan & Matematik (STEM)

(i) Sains Hayat

- Sains Tumbuhan
- Biofizik
- Biokimia
- Biologi
- Bioteknologi
- Ekologi, Evolusi dan Alam sekitar
- Entomology
- Farmakologi & Farmasi
- Fisiologi
- Genetic & Heredity
- Immunology
- Mycology
- Palaeontology
- Parasitology
- Pemakanan
- Perhutanan
- Perikanan
- Persekitaran
- Pertanian
- Sains Veterinar
- Toxicology
- Virology
- Zoology

(ii) Sains Fizikal

- Astronomi dan Astrofizik
- Crystallography
- Earth Science
- Fizik
- Kimia
- Matematik & Statistik
- Meteorologi dan Sains Atmosfera
- Nanoteknologi
- Sains Polimer

(iii) Teknologi Kejuruteraan (Berdasarkan Rangka Kerja 10-10 MySTIE)

Bioscience Technology

- Gene Editing & Engineering
- Nanobiotechnology
- Molecular Omics Technology
- Bioinformatics & Biocomputing
- Advanced Biomaterials
- Synthetic Biology

Neuro Technology

- Neuromodulation & Neurostimulation
- Neuroprosthetics
- Brain Sensing Technology
- Neurorehabilitation Technology
- Brain-Computer Interface Technology

- Biofactories
- Bioseparation & Biorefining Technologies
- Biosensor Technology
- Bioreactor and Separation Technologies
- Metadata Analytics
- Neurodiagnostics
- Neuromorphic Computing
- Neuropharmacology
- Neuroinformatics
- Neurofeedback Systems
- Neuroergonomics
- Neuromarketing

Cybersecurity & Encryption

- Network Security
- Cyber Forensics
- Cyber Risk Management
- Cryptography
- Cloud Security
- Mobile Application Security
- Cybercrime Legislation and Policy
- Ethical Hacking and Penetration Testing
- Security Audit & Vulnerability Assessment
- Secure Programming (Encryption)

Blockchain

- Cryptography Technology
- Computer Network
- Distributed Ledger Technology
- Information Systems
- Blockchain Programming
- Computer Science
- Security Engineering
- Software Engineering
- Database Management
- Management, Economics/ Crypto-Economy and Finance
- Digital Identity Management
- Business Development
- Telecommunications

Augmented Analytics & Data Discovery

- Machine Learning
- Predictive Analytics
- Text Mining
- Data Mining
- Business Intelligence
- Natural Language Generation
- Data Management
- Data Science
- Cloud Computing

Advanced Materials

- Nanoengineered Materials/ Nanotechnology
- Derivative Materials
- Biomaterials Engineering
- Materials Science
- Fabrication & Integration Engineering
- Functional/ Smart Materials
- Metamaterials
- Organic, Green & Renewable Materials
- Multi-Materials Structures
- Polymer Science
- Biomedical Materials
- Printing & Flexible Electronics
- Catalysts

Sensor Technology

- Micro-Electro-Mechanical Systems (MEMS)
- Piezoceramics
- Wearable Biosensors
- Electrochemical Sensors
- Microelectronics
- Nanosensors
- Smart Dust Sensor Network
- Soft Sensor
- Electro-Optical and Chemical Sensors
- Monitoring and Control Systems
- Printed Sensor System

4D/5D Printing

- Materials Science
- Advanced Design
- Software Engineering
- Advanced Materials
- Electronic & Controls
- Robotic & Mechatronic
- Precise Engineering
- Additive Manufacturing
- Computational Modelling
- Digital Photography
- Printing Materials
- Printing & Flexible Electronics
- Construction & Automobile Components

5G/6G

- Machine Type Communication/ IoT Communications
- Medium Access Control
- Interference Management
- New Waveform Design and GHz/THz
- Massive MIMO Technology and Intelligent
- Terrestrial and Satellite Integrated Network
- AR/VR/XR and Internet of Senses Over 5G/6G
- Crowdsourcing Applications
- Electromagnetic Fields Effect (EMF) On Humans
- Quality of Experience (QOE)
- Smart Metasurfaces
- Autonomous Mobility
- Intelligent Edge

B) Kecerdasan Buatan (*Artificial Intelligence*)

- Machine Learning
- Neural Network
- Robotics
- Deep Learning
- Computer Vision
- Natural Language Processing (NLP)
- Knowledge Graphs
- Generative Adversarial Networks (GAN)
- Cloud Computing
- Advanced Control Systems

C) Ekonomi

- Ekonometrik
- Sejarah Ekonomi
- Ekonomi
- Ekonomi Politik

D) Undang-Undang

- Undang-undang Perbankan
- Undang-undang Komersial
- Pengajian Undang-undang Jenayah
- Undang-undang Persaingan
- Sejarah Perundangan
- Undang-undang Adat
- Undang-undang Perdagangan Antarabangsa
- Perundangan
- Undang-undang Perburuhan
- Amalan Perundangan
- Amalan Notari
- Pengajian Paralegal
- Undang-undang Syariah
- Undang-undang Percukaian

E) Kewangan Islam

- Perbankan dan Kewangan Islam
- Perdagangan Islam
- Mu'amalat
- Takaful