CENTRE FOR
GRADUATE STUDIES

PEJABAT AKADEMIK

UTHM

UTHM
Universiti Tun Hussein Onn Malaysia

UTHM
POSTGRADUATE
PROSPECTUS

Centre for Graduate Studies
UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FIRST EDITION (2016)
SECOND EDITION (2018)

UTHM

Universiti Tun Hussein Onn Malaysia (UTHM), named after the third Prime Minister of Malaysia, is a Malaysian Technical University Network (MTUN) of public university primarily focusing on Engineering and Technology. UTHM is strategically located in the green suburb of Batu Pahat, Johor which is about 1.5 hours drive to Singapore and 3 hours to Kuala Lumpur. Currently, the University has more than 16,000 students, including over 740 international students from 25 countries all over the world. UTHM has been rated overall 4-star by QS Stars University Ratings in 2018 with 5-star rating in Teaching, Inclusiveness, Employability, Facilities and Social Responsibility. Furthermore, the University was ranked top 300 in QS World University Rankings in Mechanical, Aeronautical and Manufacturing Engineering Subject in 2015, 2017 and 2018. At present, more than 70 % of the academic staff from eight faculties are PhD holders with qualifications in various disciplines to teach and guide post graduate students.

PROGRAMMES OFFERED

All UTHM graduate programmes are designed according to Malaysian Qualifications Framework (MQF) and accredited by Malaysian Qualifications Agency (MQA). These programmes are recognised internationally and conducted in compliance with ISO 9001:2015.

• Doctor of Philosophy by Research

This programme is a research degree by thesis under the supervision of experienced members of academic staff or a supervisory panel. Minimum duration of study is **2 years for full time** and **3 years for part time**. Student's progress is monitored and assessed by the supervisor at the end of each semester. Final assessment is made on the thesis via an oral examination. A student who has satisfied the Examination Committee in all aspects of his/her work is eligible for the award of the degree of Doctor of Philosophy.

• Master's Degree by Research

This programme is a research degree by thesis under the supervision of experienced members of academic staff or a supervisory panel. Minimum duration of study is **1 year for full time** and **2 years for part time**. Student's progress is monitored and assessed by the supervisor at the end of each semester. Final assessment is made on the thesis via oral examination. A student who has satisfied the Examination Committee in all aspects of their work is eligible for the award of the Master's degree.

• Master's Degree by Coursework

This programme is designed to extend the knowledge and skills gained from the first degree and to develop new professional skills in the students. Minimum duration of study is **1 year for full time** and **2 years for part time**. The programme involves lectures, seminars and project work. A minimum of 40 credits of study and a final **Cumulative Point Average (CPA) of at least 3.0** is required for the award of the Master's degree. The Programme comprises of a combination of compulsory courses, electives and a Master's dissertation. Assessments are made through assignments, tests, master's dissertation and final examinations. Master's dissertation is assessed through an oral presentation and a written report

• Master's Degree by Mixed-mode

This programme is a combination of course-work and research activities. Minimum duration of study is **1 year for full time** and **2 years for part time**. Assessment depends on the coursework and dissertation (research work). The component of the coursework is not more than 50% and the dissertation contributes the other 50%. This programme develops research skill of the students on top of enhancing the theoretical knowledge of the subject area.

ADMISSION REQUIREMENTS

Doctor of Philosophy
- Master's Degree from UTHM or any other Higher Learning Institutions recognised by UTHM Senate;
- Other equivalent qualifications with related experience accepted by UTHM Senate;

Master's Degree
- Bachelor's Degree with honours from UTHM or any other Higher Learning Institutions recognised by UTHM Senate;
  - Minimum CPA with cumulative grade point average (CPA) of 2.50 out of a possible 4.0 for Master's Degree by Coursework while Master's Degree by Research and Mixed Mode requires a minimum CPA of 2.75. Master in Business Administration (MBA) also requires a CPA of 2.75.
- Other equivalent qualifications with related experience endorsed by UTHM Senate.

ENGLISH REQUIREMENTS FOR INTERNATIONAL APPLICANT

International students are required to meet a minimum score of TOEFL 500[1], IELTS 5[2], TOEIC600[3], MUET Band 3 or any English requirement that is equavalent to CEFR B1[4] and recognized by UTHM Senate. Exemptions are given to:
- Students who graduate from Malaysian universities recognized by the Senate;
- Students who graduate (Master's Degree for PhD application; Bachelor's Degree for Master application) from English Speaking Countries as listed*.

[1]*Certificate must be issued by Educational Testing Service (ETS)*
[2]*Certificate must be issued either by IDP:IELTS Australia, British Council or Cambridge English Language Assessment*
[3]*Test of English for International Communication*
[4]*Common European Framework of Reference for Language*

English Speaking Countries: Anguilla, Antigua and Barbuda, Australia, Bangladesh, Bermuda, British Virgin Island, Bahamas, Barbados, Canada, Cayman Island, Christmas Island, Cook Island, Falkland Islands, Fiji, Guernsey, Guam, Gibraltar, Grenada, Guyana, Ghana, Hong Kong, India, Isle of Man, Ireland, Liberia, Jersey, Jamaica, Kiribati, Kenya, Montserrat, Malawi, Malta, Marshall Islands, Mauritius, Niue, Micronesia, Namibia, Nauru, New Zealand, Philippines, Nigeria, Norfolk Island, Papua New Guinea, Pakistan, Saint Kitts and Nevis, Puerto Rico, Palau, Rwanda, Singapore, Seychelles, Saint Lucia, Saint Vincent and the Grenadines, St Helena, Samoa, Swaziland, Sierra Leone, Solomon Island, South Africa, Sudan, Uganda, Tanzania, Tonga, Trinidad & Tobago, Turks and Caicos Island, United Kingdom, US Virgin Islands, United States of America, Zambia and Zimbabwe.

ADMISSION

Application for graduate programmes is open throughout the year. For Coursework and Mixed-mode programmes, the admission is in **February** and **September** every year. However, admission for Research programmes is open throughout the year.

All applications must be made via online system. For more information please refer to our website:

SCAN HERE

RESEARCH CENTRES

UTHM has a multitude of expertise in various disciplines with latest state-of-the-art equipment and facilities at these research centres:

Centre of Excellence (CoE)

1. Microelectronics and Nanotechnology - Shamsuddin Research Centre (MiNT-SRC)
2. Advanced Manufacturing and Materials Centre (AMMC)
3. Research Centre for Applied Electromagnetic (EMCentre)
4. Research Centre for Soft Soil (RECESS)
5. Advanced Centre for Technical & Vocational Education (ACTIVE)
6. Industry Centre of Excellence for Railway (ICOE-REL)

Centre of Research (CoR)

1. Advanced Technology Centre (ATC)
2. Centre for Facilities Management (CEFM)
3. Center of Business Development (CBD)
4. Wireless and Radio Science Centre (WARAS)
5. Software and Multimedia Centre (SMC)
6. Centre for Energy and Industrial Environment Studies (CEIES)
7. Center for Research in Computational Mathematics (CERCOM)
8. Centre of Research for Sustainable Uses of Natural Resources (SUNR)

9. Smart Driving Research Centre (SDRC)
10. Jamilus Research Centre (JRC) – Sustainable Construction (material, integrated design and construction management)
11. Micro-pollutont Research Centre (MPRC)
12. Precision Machining Research Center (PREMACH)
13. Center of Research for Mechanical Failure Prevention and Reliability (MPROVE)
14. Centre of Applied Geomatics for Disaster Prevention (CAGeD)

For more information, please refer to http://iie.uthm.edu.my/

ACCOMMODATION

The University provides a limited number of hostel accommodations for graduate students. However, private accommodation is easily available around the campus, with rental that fit a student's budget. Monthly rental could range between approximately RM200.00 for a room and RM500.00 for a house.

The University facilities are rated with a 5-star rating by QS Stars University Rating:

QS STARS™
RATED FOR EXCELLENCE
2018
FACILITIES
★ ★ ★ ★ ★

Among the facilities provided by the University are as below :
- Free internet access
- Transportation
- Cafeterias
- Residential Colleges
- Medical and Health Services
- Mini Post Office
- Olympic-sized swimming pool
- Golf driving range
- Sport & Recreational Facilities
- Banking Services and ATM
- Student Service Kiosk and Cooperative Shop
- Career and Counselling Services
- Mosque

FUNDING

A number of funding opportunities are available (subject to availability and application):
- UTHM Biasiswazah Scholarship
- UTHM Graduate Research Grant, (for local only)
- Malaysian International Scholaship, (for international only)
- Commonwealth Scholarship and Fellowship Plan
- MyBrain15 (for local only)
- MARA (for local only)
- Yayasan Negeri (for local only)
- National Higher Education Fund Corporation, PTPTN (for local only)
- Financial Institutions,Government Agencies or others.

ENQUIRIES

All enquiries are to be addressed to:
Dean
Centre for Graduate Studies
Universiti Tun Hussein Onn Malaysia
86400 Parit Raja, Batu Pahat, Johor, MALAYSIA

Phone	: +607-453 7757/7509/7906/7905
Fax	: +607-4536111
E-mail	: ps@uthm.edu.my
Web	: cgs.uthm.edu.my

SCAN HERE

CIVIL AND ENVIRONMENTAL ENGINEERING

PROGRAMMES OFFERED

- Doctor of Philosophy in Civil Engineering (Research) MQA/FA5872
- Master of Civil Engineering (Research) MQA/FA5871
- Master of Civil Engineering (Coursework) MQA/FA5870

RESEARCH PROGRAMMES

Areas of Research:

- Geotechnical Engineering
- Construction Engineering
- Structural Engineering
- Construction Materials
- Environmental Engineering
- Water Resources Engineering
- Highway Engineering
- Transportation Engineering
- Traffic Engineering
- Building Engineering
- Construction Management
- Concrete Technology

COURSEWORK PROGRAMMES

Electives:

- Geotechnical Engineering
- Structural Engineering
- Highway and Transportation Engineering
- Environmental Engineering
- Water Resources Engineering

ELECTRICAL AND ELECTRONICS ENGINEERING

PROGRAMMES OFFERED

- Doctor of Philosophy in Electrical Engineering (Research) MQA/FA5860
- Master of Electrical Engineering (Research) MQA/FA5859
- Master of Electrical Engineering (Coursework) MQA/FA5858

RESEARCH PROGRAMMES

Areas of Research:

COMMUNICATION ENGINEERING

Mobile Ad Hoc and Sensor Networks • Wireless and Optical Communications • Electromagnetic Compatibility • Ionosphere and Aerospace Sciences • Radio Science and Satellite Communications • Antenna and Wave Propagation • Microwave and RF Engineering • Digital Signal Processing

ELECTRONIC ENGINEERING

Medical Electronics • Microelectronics • Nanotechnology • Biomedical Engineering • Medical Image Processing • Medical Instrumentation • Biosensors • Telemedicine • Thin Film • Biomedical Modeling & Simulation • VLSI Design • MEMS Design • Reliability & Failure Analysis • Rehabilitation Engineering

MECHATRONIC AND ROBOTIC ENGINEERING

Industrial Automation • Mechatronic and Robotic Systems • Medical Robotic and Teleoperation • Autonomous System • Advanced Computer Vision • Advanced Machine Learning / Neural Networks & Statistical Models • Rehabilitation Engineering • Sensing Technologies • Process Tomography • Soft Robotics • Advanced Control System

POWER ENGINEERING

Renewable Energy • Power Quality • Power Electronics • Power System Protection • High Voltage Engineering • Power System Stability • Electric Machine & Drive

COMPUTER ENGINEERING

High-Performance Computing • Embedded System Computing • Image and Vision Systems • Intelligent Systems • Virtual Reality Systems • VLSI System • Computer Network and Security • Internet of Things

COURSEWORK PROGRAMMES

Electives:

Power Engineering • Communication Engineering • Mechatronics Engineering • Medical Electronics • Microelectronics • Computer Engineering

MECHANICAL AND MANUFACTURING ENGINEERING

PROGRAMMES OFFERED

- Doctor of Philosophy in Mechanical Engineering (Research)
  MQA/FA5863
- Master of Mechanical Engineering (Research) MQA/FA5862
- Master of Mechanical Engineering (Coursework) MQA/FA5861
- Master of Science in Manufacturing Engineering (Mixed Mode) MQA/FA3097
- Master of Science in Material Engineering (Mixed Mode)
  MQA/FA3025

RESEARCH PROGRAMMES

Areas of Research:

MECHANICS

Noise and Vibration • Fatigue and Fracture Mechanics • Finite Element Methods • Computational Fracture Mechanics • Impact and Crashworthiness Mechanics • Strength of Solids and Structures • Control Engineering • Intelligent Control System Design • Structural Health Monitoring

MANUFACTURING

Advanced Manufacturing Process • Advanced Machining Processes • Computer Aided Design Rapid Prototyping • Quality Engineering • Computer Aided Manufacturing • Industrial Engineering • Industrial Automation • Modeling and Optimisations • Scheduling and Optimisations • Optimisation Method in Metal Casting • Metal Fabrication • Recycling Technology • Quality and Productivity Improvement • Production and Operations Management • Human Factors and Ergonomics • Sustainable Manufacturing • Additive Manufacturing • Intelligent System for Manufacturing • Manufacturing System for Optimisation • Micromachining Process • Micromanufacturing • New Fabric Technology • Industrial Textile Application • Metrology and Measurement

MATERIALS

Composite • Biomaterials • Polymer • Powder Metallurgy • Membrane • Porous Materials • Computer Aided Engineering • Engineering Design Methodologies Ceramics / Electro-ceramics • Electroplating • Thin Film and Coating • Lighweight Alloy • Product Lifecycle Management • Railway Engineering • Engineering Education • Nanomaterials • Natural Fibre Based Composite

THERMOFLUIDS

Thermodynamics • Heat Transfer • Computational Fluid Dynamics • Indoor Air Quality and Thermal Comfort • Combustion and Pollution Control • Green Technology • Burner System • Vehicles Performance and Emissions • Alternative and Renewable Fuel • Spray and Atomisation • Wind Turbine

AERONAUTICS

Aircraft propulsion • Aircraft Turbomachinery • Aircraft Material and Structure • Aircraft design • Aerodynamics • Aircraft Control & Dynamics • Unmanned Aerial Vehicle • Aviation Management

COURSEWORK PROGRAMMES

Electives:
Manufacturing • Thermofluids • Materials • Mechanics

MIXED-MODE PROGRAMMES

Electives (Manufacturing):
Additive Manufacturing • Machining and Machine Tools • Advanced Metal Casting Process • Advanced Manufacturing Process • Product Design Development • Intelligent Design and Manufacturing • Industrial Robotics • Industrial Automation • Human Factor Engineering • Quality Management System

Electives (Materials):
Materials Characterization and Testing • Engineering Composite Biomaterials • Engineering Polymers • Metallurgy • Engineering Ceramics • Thin Film & Coating • Corrosion and Prevention • Porous Materials

FAKULTI KEJURUTERAAN MEKANIKAL DAN PEMBUATAN
Faculty Of Mechanical And Manufacturing Engineering

APPLIED SCIENCES AND TECHNOLOGY

PROGRAMMES OFFERED

- Doctor of Philosophy in Science (Research) MQA/FA0080
- Master of Science (Research) MQA/FA0084
- Master of Science (Applied Mathematics) (Coursework) MQA/FA1349
- Master of Science (Industrial Statistics) (Coursework) MQA/FA1350
- Master of Science (Biodiversity Conservation) (Mixed Mode) MQA/PA3485
- Master of Science (Materials Chemistry) (Mixed Mode) MQA/PA3691

RESEARCH PROGRAMMES

Areas of Research:

MATHEMATICS

Fuzzy Mathematics · Fluid Dynamic · Fluid Mechanics · Numerical Methods · Computational Mathematics · Mathematics Modelling · Biomechanics · Optimization · Engineering Mathematics · Applied Mathematics · Topology

STATISTICS

Statistical Modelling · Time Series Analysis · Biostatistics · Statistical Mathematics · Probability and Statistics · Fuzzy Statistics · Stochastic Modelling · Medical Statistics · Quality Control · Nonparametric Method · Robust Statistics · Design of Experiment · Multivariate Analysis · Statistical Machine Learning and Data Mining · Network Analysis · Big Data · Operational Research and Optimization

PHYSICS

Material Science · Surface Science · Nanotechnology · Health Physics · Energy · Biophysics · Computational Physics · Nuclear Physics · Environmental Physics · Optoelectronics · Instrumentation Physics · Semiconductor Physics · Radiation Technology

BIOLOGY

Botany • Zoology • Nature Tourism • Entomology • Herbal Science • Genetic (Animal & Plant) • Ecophysiology of Plants • Conservation of Natural Resources • Protected Area Management • Environmental Management • Animal Ecology • Conservation Biology • Marine Biology • Terrestrial Ecology • Ecological Dynamics

CHEMISTRY

Organic Chemistry • Inorganic Chemistry • Material Chemistry • Advanced Material Biopolymer • Polymer Technology • Surface Chemistry and Catalysis • Membrane Technology • Environmental/Green Technology

APPLIED SCIENCE AND TECHNOLOGY

Food Technology • Food Science • Functional Food & Nutraceutical • Nutrition • Food Safety & Quality • Food Innovation and Product Development • Food Processing • Food Engineering • Food Chemistry • Food Biochemistry • Food Biotechnology • Food Microbiology • Natural Product Chemistry • Traditional Knowledge • Ethnobotany • Ethics and Integrity • Social Transformation and Leadership • Islamic Civilization • Islamic Thought and Philosophy • English and Communication • Islamic Science and Technology • Multimedia Technology and Da'wah • Social Development • E-Management • English for Technology and Communication • Technical Communication • English for Academic and Research Purposes

TECHNOLOGY MANAGEMENT AND BUSINESS

PROGRAMMES OFFERED

- Doctor of Philosophy in Technology Management (Research) MQA/FA5869
- Doctor of Philosophy in Real Estate and Facilities Management (Research) MQA/FA5868
- Master of Science in Technology Management (Research) MQA/FA5867
- Master of Science in Real Estate and Facilities Management (Research) MQA/FA5866
- Master of Science in Construction Technology Management (Coursework) MQA/FA0087
- Master in Business Administration (Coursework) MQA/FA10711

RESEARCH PROGRAMMES

Areas of Research:

TECHNOLOGY MANAGEMENT

Operation Management & Strategy • Manufacturing Process • Total Quality Management • Industrial Forecasting • Supply Chain Management | ICT in Manufacturing and Management • Technology Assessment • Knowledge Management • Performance Evaluation • Construction Quality • Concrete Technology in Construction • ICT in Construction • Project Management • Environmental Management • Social Impact Assessment • Sustainable Development in Construction • Innovation & Commercialization • Technology Transfer • Technology Adoption • Technology Foresight • Service Management • Product Development • Technology Acquisition

REAL ESTATE AND FACILITIES MANAGEMENT

Technology and Practice in Real Estate and Facilities Management • Real Estate Finance and Investment • Real Estate Development and Marketing • Asset Management • Business Strategies and Support Services in Real Estate and Facilities Management • Real Estate Valuation • Real Estate Agency and Marketing • Benchmarking of Real Estate and Facilities Management Best Practice • Environmental Management in Real Estate and Facilities Management • Sustainable Development in Construction • Housing Design • Housing • Rural Planning and Development

TECHNICAL AND VOCATIONAL EDUCATION

PROGRAMMES OFFERED

- Doctor of Philosophy in Technical and Vocational Education (Research) MQA/FA5857
- Doctor of Philosophy in Education (Research) MQA/PA1539
- Master of Technical and Vocational Education (Research) MQA/FA5856
- Master of Technical and Vocational Education (Coursework) MQA/FA5855
- Master of Technical Education (Civil Engineering) (Coursework) MQA/FA5852
- Master of Technical Education (Electrical Engineering) (Coursework) MQA/FA5851
- Master of Technical Education (Mechanical Engineering) (Coursework) MQA/FA5853
- Master of Technical Education (Instructional Design and Technology) (Coursework) MQA/FA5854

RESEARCH PROGRAMMES

Areas of Research:

Curriculum and instruction • Information and communication technology (ICT) • Assessment and evaluation • Product Development and Design • Management and leadership • Job and career development • Educational sustainable development (ESD) • Teacher training • Transferable skills • Quality assurance • Policy and governance • Special need education • Lifelong learning • Tourism and Hospitality • Entrepreneurship • Gender issues • Employability • Work ethics • Safety and health • Internationalization • Vocational training • Accreditation on Prior Experiential Learning (APEL) • 21st century skills • Apprenticeship • Life Long Learning • Dual System • Leadership • Web-mediated learning/training

COURSEWORK PROGRAMMES

Core Education:

Research Methods • Curriculum Development • Life Long Learning • Pedagogical Practices • Assessment • Information Technology • Psychology • Educational Philosophy • Sociology • Curriculum Development • Development of Technology and Pedagogical Practices • Assessment • Information Technology • Psychology • Educational Philosophy • Development of Technical and Vocational Education and Training • Master Project

Electives:

Civil Engineering • Electrical Engineering • Mechanical Engineering • Instructional Design and Technology

COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

PROGRAMMES OFFERED

- Doctor of Philosophy in Information Technology (Research) MQA/FA5865
- Master of Information Technology (Research) MQA/FA5864
- Master of Computer Science (Information Security) MQA/FA0832
- Master of Computer Science (Software Enginering) MQA/FA0830

RESEARCH PROGRAMMES

Areas of Research:

SOFT COMPUTING
Data Mining · Neural Network · Swarm Intelligence · Decision Tree · Data Clustering · Data Classification · Rough Set · Soft Set · Pattern Recognition · Image Processing

SOFTWARE ENGINEERING
Software Requirement and Specification · Software Design · Software Management · Software Testing · Formal Method · Distributed Database · Information System

GRID AND CLOUD
Data Management · Data Replication · Security in Cloud · Grid Computing · Big Data

SECURITY
Digital Forensic · Cryptography · Steganography · Trusted Computing · Grid and Cloud Security · Computer and Network Security · Security and Privacy · Information Security

INTERACTIVE MEDIA
Video Visualization · Human Computer Interaction · Content Adaption · Mobile Content Development

WEB TECHNOLOGY
Web Semantic · Web Big Data · Pervasive Computing · Web Services · Ontology · Query Processing and Optimization · IOT

ENGINEERING TECHNOLOGY

PROGRAMMES OFFERED

- Doctor of Philosophy in Engineering Technology (Research) MQA/FA3734
- Master of Engineering Technology (Research) MQA/FA3733
- Master of Science in Railway Engineering (Mixed Mode) MQA/FA1538

RESEARCH PROGRAMMES

Areas of Research:

Civil Engineering Technology • Electrical Engineering Technology • Chemical Engineering Technology • Mechanical Engineering Technology • Occupational Safety and Health • Transportation Engineering Technology

RAILWAY ENGINEERING

Electives

Railway Electrification System • Railway Operation and Maintenance • Railway Track Engineering Design • Signalling and Communication • Project Management • Rolling Stocks Technologies and Maintenance

CENTRE FOR GRADUATE STUDIES
UNIVERSITI TUN HUSSEIN ONN MALAYSIA

With Wisdom We Explore

cgs.uthm.edu.my

like us on
facebook