ZOOMING THROUGH WITH FRENCH FORMULA

UNIVERSITI KUALA LUMPUR
MALAYSIA FRANCE INSTITUTE (UniKL-MFI)

www.unikl.edu.my
Universiti Kuala Lumpur Kampus Cawangan Malaysia France Institute (UniKL-MFI)

Universiti Kuala Lumpur Kampus Cawangan Malaysia France Institute (UniKL-MFI) is an advanced technical training center in the fields of engineering technology specializing in French state-of-the-art technology in creativity and innovation. We are committed towards providing education based on industrial technology in automation, mechanical, manufacturing and maintenance.

The UniKL-MFI campus is strategically located in Bandar Baru Bangi, a fast developing industrial-academia style town about 32 km from Kuala Lumpur city center and only 40 minutes away from the Kuala Lumpur International Airport (KLIA).

The campus is fully equipped with industrial related equipment that will enhance students learning experience of industrial job-related work in water engineering, automation (Robotic, Electrical, Mechatronics and Electromechanical), and Mechanical (Heating and Air-Conditioning Ventilation, Automotive, Machine Manufacturing, Welding, Metal Fabrication and Mechanical Engineering).

The collaboration was incorporated in February 1995 as a co-operation project between the Malaysian government and the French government. The French partners are represented by F Boccard and the Association de Formation Professionnelle de l’Industrie Rhodaniennne (AFPI) and Malaysia is represented by Majlis Amanah Rakyat (MARA). Courses offered are at diploma to degree levels. Short courses and customized courses are also available.

PROGRAMS OFFERED

- **Bachelor of Mechanical Engineering Technology (Industrial Refrigeration and Air Conditioning Systems) with Honours**
  - JPT/BPP [03/522/6/0024] 09/29, MQA/FA 11539

- **Bachelor of Mechanical Engineering Technology (Machine Manufacturing) with Honours**
  - JPT/BPP [03/521/6/0034] 05/29, MQA/FA 13102

- **Bachelor of Engineering Technology (Automation and Robotics) with Honours**
  - JPT/BPP [02/525/6/0087] 09/29, MQA/FA 13103

- **Bachelor of Engineering Technology (Welding and Quality Inspection) with Honours**
  - JPT/BPP [03/521/6/0035] 05/29, MQA/FA 11538

- **Bachelor of Automotive Engineering Technology (Maintenance) with Honours**
  - JPT/BPP [02/525/6/0056] 07/26, MQA/FA 11537

- **Bachelor of Mechatronics Engineering Technology with Honours**
  - JPT/BPP [02/525/6/0077] 06/24, MQA FA 11536

- **Bachelor of Electromechanical Engineering Technology with Honours**
  - JPT/BPP [02/526/6/0012] 01/25, MQA/FA 1398

- **Bachelor of Water Resources Engineering Technology with Honours**
  - JPT/BPP [8/521/6/0035] 01/27, MQA/FA 12955

- **Bachelor of Engineering Technology (Water Engineering and Energy) with Honours**
  - JPT/BPP [8/522/6/0081] 01/27, MQA PA12954

- **Bachelor of Mechanical Engineering with Honours**
  - JPT/BPP [02/521/6/0029] 05/29, MQA/FA 1625

- **Diploma of Engineering Technology in Air Conditioning and Refrigeration**
  - JPT/BPP [02/524/4/0043] 06/24, MQA A 10027

- **Diploma of Engineering Technology in Welding**
  - JPT/BPP [02/524/4/0076] 06/24, MQA A 9970

- **Diploma of Engineering Technology in Automotive Maintenance**
  - JPT/BPP [02/524/4/0046] 06/24, MQA A 10023

ENTRY REQUIREMENTS

DIPLOMA PROGRAMS

- Pass in SPM or its equivalent with at least credits (minimum Grade C and higher) in Mathematics and Natural Sciences or Technical Based Subjects; OR
- Pass in O-Level with minimum Grade C in three (3) subjects including Mathematics and science or technical based subjects; OR
- Accredited Certificate in Engineering, Engineering Technology, Technical or Malaysian Skills Certificate Level 3 with PT3, or its equivalent; OR
- Recognized related Technical/Vocational/Skills qualifications AND an adequate and relevant bridging programme; OR
- Pass Technical/Vocational/Skills qualifications and recognized and approve by UniKL Senate
- Pass in Sijil Vokasional Malaysia (SVM) qualification been recognized by government of Malaysia and according to approval by UniKL Senate. SVM is recognized as equivalent to 3 credits SPM for candidates who obtain;
  - Academic CGPA is equal to or greater than 2.00;
  - Vocational CGPA is equal to or greater than 2.67 and competent in all vocational modules;
  - Credit in Bahasa Melayu with SVM Code 1104;
  - Pass in Sejarah for graduate cohort 2013-2016
BACHELOR OF ENGINEERING TECHNOLOGY PROGRAMS

- Pass in STPM/Matriculation/Foundation or its equivalent, with minimum CGPA 2.0 and at least Grade C in Mathematics and one relevant Science subject; OR
- Pass in International Baccalaureate (IB) with at least 24 points; OR
- Pass in A-Level with minimum Grade D in Mathematics one (1) relevant Science subject; OR
- Pass in Sijil Tinggi Agama Malaysia (STAM) with minimum grade of Jayyid and pass SPM or its equivalent with minimum Grade C in Mathematics and one relevant Physical Science subjects (ie; Physic, Chemistry & etc); OR
- Recognized Diploma in Engineering/Engineering Technology or its equivalent with CGPA 2.0; OR
- Recognized related Technical/Vocational/Skills Diploma with CGPA 2.0; OR
- Pass the DKM/DLK/DVM with a minimum CGPA of 2.50 subject to the approval of the Senate / Academic Board of the relevant institution; OR Pass the DKM/DLK/DVM with a minimum CGPA of 2.00 have at least two (2) years of work experience in the related field.

BACHELOR OF MECHANICAL ENGINEERING WITH HONOURS

- Pass in STPM/Matriculation/Foundation or its equivalent, with a minimum CGPA 2.0 and a grade C in Mathematics and one (1) of the Physical Science subjects (ie; Physic, Chemistry and etc); OR
- Pass in International Baccalaureate Diploma (IBD) with minimum of 24 points and attained a minimum score of 4 in Mathematics and one (1) of the Physical Science subjects (ie; Physic, Chemistry and etc); OR
- Pass in A-Level with minimum Grade D in Mathematics and one (1) of the Physical Science subjects (ie; Physic, Chemistry and etc); OR
- Pass in Sijil Tinggi Agama Malaysia (STAM) with minimum grade of Jayyid and pass SPM or equivalent with minimum Grade C in Mathematics and one relevant Physical Science subjects (ie; Physic, Chemistry & etc); OR
- Pass in Diploma (Level 4, KKM) related to Engineering/Engineering Technology fields from higher education provider recognized by Government of Malaysia with a minimum CGPA 2.00.

BACHELOR OF MECHANICAL ENGINEERING TECHNOLOGY (INDUSTRIAL REFRIGERATION AND AIR CONDITIONING SYSTEMS) WITH HONOURS

JPT/BPP (R3/622/6/0024) 09/29, MQA/FA 11539

**YEAR 1 - SEMESTER 1**
- Falsafah & Isu Semasa / Philosophy & Current Issue
- Calculus 1
- Fundamental English
- Professional English 1
- Engineering Ethics
- Occupational Safety & Health
- Refrigeration Fundamentals

**YEAR 2 - SEMESTER 3**
- Calculus 2
- Introduction to Industrial Information Technology
- Introduction and Study of Air-Conditioning System
- Heating and Cooling Load of Building
- Computer Assisted Design & Simulation 1
- RAC System Studies & Troubleshooting
- Isu-Isu Kontemporari Muslim di Malaysia / Culture & Lifestyle in Malaysia 2

**YEAR 3 - SEMESTER 5**
- Production of Refrigeration
- Computer Assisted Design and Simulation 2
- Applied Acoustic and Vibration
- Applied Thermodynamics
- Technopreneurship
- Elective 1
- French 1

**YEAR 3 - SEMESTER 6**
- Final Year Project 1
- Practical Work 2
- Heat Exchanger and Transportation of Air-Conditioning Technology and Control Refrigeration System
- Innovation Management
- French 2
- Elective 2

**YEAR 4 - SEMESTER 8**
- Industrial Training

**ELECTIVE SUBJECTS**
- Indoor Air Quality
- Biological Applications and Refrigeration
- Cold Room and Refrigerated Showcase
- Green Energy and Environment
- Building Energy Simulation
- Building Life Cycle Assessment

**CAREER PATH**
- Product Engineer – Heat Transfer Products Group
- Industrial Maintenance Refrigeration Tech
- Project Engineer – Refrigeration New
- Product Development/Industrial
- Energy Engineer
- Operating Engineer – Licensed
- Design Engineer

BACHELOR OF AUTOMOTIVE ENGINEERING TECHNOLOGY (MAINTENANCE) WITH HONOURS

JPT/BPP (R2/525/6/0056) 07/26, MQA/FA 11537

**YEAR 1 - SEMESTER 1**
- Falsafah & Isu Semasa / Philosophy & Current Issue
- Calculus 1
- Fundamental English
- Professional English 1
- Occupational Safety & Health
- Engineering Ethics
- Petrol Engine Technology

**YEAR 1 - SEMESTER 2**
- Electrical Principles
- Material Science
- Static and Dynamics
- Workshop Practice
- Engineering Drawing
- Co-curruculum 2
- Penghayatan Etika & Peradaban / Bahasa Melayu Komunikasi 2

**YEAR 2 - SEMESTER 3**
- Calculus 2
- Introduction to Industrial Information Technology
- Vehicle Transmission 1
- Automotive 1
- Isu-Isu Kontemporari Muslim di Malaysia / Culture & Lifestyle in Malaysia 2

**YEAR 2 - SEMESTER 4**
- Statistics for Engineering Technology
- Ducting and Piping Network
- Engineering Thermofluids
- Practical Work 1
- Project Management
- Professional English 2
BACHELOR OF ENGINEERING TECHNOLOGY (WELDING AND QUALITY INSPECTION) WITH HONS

**PROGRAM CONTENTS**

**YEAR 1 - SEMESTER 1**
- Fakulti & Ibu Semasa / Philosophy & Current Issue
- Calculus 1
- Fundamental Engish
- Professional English
- Engineering Ethics
- Occupational Safety & Health
- Design and Fabrication (Vessel)

**YEAR 2 - SEMESTER 2**
- Electrical Principles
- Material Science
- Static and Dynamics
- Workshop Practice
- Engineering Drawing
- Co-curriculum 2
- Penghijauan Etika & Peradaban / Bahasa Melayu Komunikasi 2

**YEAR 3 - SEMESTER 5**
- Project Management
- Welding Metallurgy
- Corrosion
- OT and NDT
- Technopreneurship
- French 1
- Elective 1

**YEAR 3 - SEMESTER 6**
- Welding Inspection and Technology
- Design and Fabrication (Structure)
- Welding Reclamation
- Failure Analysis
- Elective 2
- Final Year Project 1
- French 2

**YEAR 3 - SEMESTER 7**
- Innovation Management
- Welding Procedure Construction
- Fabrication and Application
- Engineering
- Final year Project 2
- Elective 3

**YEAR 4 - SEMESTER 7**
- Industrial Training

**ELECTIVE SUBJECTS**
- Advanced Welding Process
- CAD Modelling and CAE
- Robotic Welding
- Advanced Manufacturing Technology
- Finite Element Analysis in Welding
- Introduction to Underwater Welding (Wet Welding)

**CAREER PATH**
- Welding/Quality Engineer
- Welding Engineer
- Project Inspection Supervisor
- Quality Specialist Welding Auditing
- Welding Field Engineer

BACHELOR OF MECHANICAL ENGINEERING TECHNOLOGY (MACHINE MANUFACTURING) WITH HONS

**PROGRAM CONTENTS**

**YEAR 1 - SEMESTER 1**
- Fakulti & Ibu Semasa / Philosophy & Current Issue
- Applied Calculus 1
- Fundamental Engish
- Professional English
- Engineering Drawing
- Occupational Safety & Health
- Engineering Ethics

**YEAR 3 - SEMESTER 5**
- Project Management
- Jigs and Fixtures Design
- Engineering Thermofluids
- Fundamental Metallurgy
- Technopreneurship
- Elective 1
- French 1

**YEAR 3 - SEMESTER 6**
- Automation Technology
- Advanced Manufacturing Technology
- Modern Machining
- Machine Tool Design
- French 2
- Elective 2
- Final Year Project 1

**YEAR 3 - SEMESTER 7**
- Innovation Management
- Manufacturing Design and Process
- Mechanical Engineering Laboratory
- Final year Project 2
- Elective 3

**YEAR 4 - SEMESTER 8**
- Industrial Training

**ELECTIVE SUBJECTS**
- Robotics
- Computer Aided Design 2
- DT and NDT
- Production and Operation Management
- Robotic Welding
- Computer Aided Engineering 2

**CAREER PATH**
- Manufacturing Engineer
- Design Engineer
- Hydraulics Engineer
- Manufacturing Process Engineer
- Manufacturing Automation Engineer

BACHELOR OF MECHATRONICS ENGINEERING TECHNOLOGY WITH HONS

**PROGRAM CONTENTS**

**YEAR 1 - SEMESTER 1**
- Fakulti & Ibu Semasa / Philosophy & Current Issue
- Calculus 1
- Fundamental English
- Professional English
- Engineering Ethics
- Occupational Safety & Health
- Mechatronics System Design

**YEAR 3 - SEMESTER 5**
- Power Electronics and Drives
- Robotics
- Production & Operation Management
- Programmable Logic Controller & Industrial Networking
- Control System
- Elective 1
- French 1

**YEAR 3 - SEMESTER 6**
- Computer Integrated Manufacturing
- Totally Integrated Automation
- Technopreneurship
- Final Year Project 1
- French 2
- Elective 2

**YEAR 4 - SEMESTER 7**
- Innovation Management
- Automated System: Diagnostic and Maintenance
- Manufacturing Process
- Final Year Project 2
- Elective 3

**YEAR 4 - SEMESTER 8**
- Industrial Training

**ELECTIVE SUBJECTS**
- Mechatronics System Design

**CAREER PATH**
- Manufacturing Process Engineer
BACHELOR OF ENGINEERING TECHNOLOGY (WATER ENGINEERING AND ENERGY) WITH HONOURS

JPT/BPP [N/523/6/0315] 01/27, MQA/PA12565

PROGRAM CONTENTS

YEAR 1 - SEMESTER 1
- Fundamental English
- Calculus 1
- Professional English 1
- Occupational Safety and Health
- Fallsah & Itsus Semasa / Philosophy & Current Issue
- Electrical Principles
- Engineering Ethics
- French 1

YEAR 3 - SEMESTER 5
- Elective 1
- Entrepreneurship
- Project Management
- Power Electronics and Auxiliary Equipment
- Economics and Energy
- GIS and Remote Sensing for Water Engineering
- Computer Modelling Simulation Engineering (CMSE)
- Life Cycles Analysis

YEAR 3 - SEMESTER 6
- Elective 2
- Final Year Project 1
- Power System Design and Operation
- PLC and Industry Networking
- SCADA for Water Technology
- Hydraulic Structures and Hydropower Design

YEAR 4 - SEMESTER 7
- Final Year Project 2
- Innovation Management
- Hydrorenewable Potential and Feasibility Study
- Environmental Impact Assessment (EIA)
- Energy Management and Efficiency
- Elective 3

YEAR 4 - SEMESTER 8
- Industrial Training
- Hydro Plant Engineer
- Water Resource Engineer
- Water Distribution Engineer

CAREER PATH
- Mechatronics Mechanical Engineer
- Mechatronics Design Engineer
- Mechatronics Engineer
- Lead System Design Engineer - Mechatronics

BACHELOR OF MECHANICAL ENGINEERING WITH HONOURS

JPT/BPP (R3/521/6/0029) 05/29, MQA/FA 1625

PROGRAM CONTENTS

YEAR 1 - SEMESTER 1
- Computer Programming for Engineers
- Fundamental English
- Engineering Practice and Professionalism
- Mathematics for Engineers 1
- Fallsah & Itsus Semasa / Philosophy & Current Issue

YEAR 1 - SEMESTER 2
- Mathematics for Engineers 2
- Engineering Drawing and CAD
- Electrical Principles
- Metric and Engineering Workshop
- Statics

YEAR 2 - SEMESTER 2
- Vector Calculus
- Solid Mechanics 1
- Electronics Engineering
- Thermodynamics 1
- Manufacturing Processes
- Language Elective (French 1 / Mandarin 1 / etc)

YEAR 2 - SEMESTER 4
- Dynamics 1
- Fluid Mechanics 1
- Thermodynamics 2
- Solid Mechanics 2
- New Product Development
- Integrated Water Resource Management
- Industrial Control Technology

CAREER PATH
- Consultant Engineer
- Water Engineering Design Engineer
- Surface Water Engineer
- Process Automation Engineer
DIPLOMA OF ENGINEERING TECHNOLOGY IN WELDING

PROGRAM CONTENTS

YEAR 1 - SEMESTER 1
- Technical Mathematics I
- OAW and SMAW Practices
- Engineering Drawing
- Welding Processes and Consumables
- Interpersonal Skills
- Amalan Islam di Malaysia / Religious Practices in Malaysia
- Co-curriculum I

YEAR 1 - SEMESTER 2
- Welding Joint, Symbols and Blueprint Reading
- CTAW and SMAW Practices
- Technical Mathematics 2
- French I
- Pengajian Malaysia 2 / Bahasa Melayu
- Kemunikais 1
- Competency English
- Computer Aided Drafting

YEAR 3 - SEMESTER 5
- Welding Joint Analysis 2
- Welding Inspection and Testing
- Final Year Project
- Elective

DIPLOMA OF ENGINEERING TECHNOLOGY IN AIR CONDITIONING AND REFRIGERATION

PROGRAM CONTENTS

YEAR 1 - SEMESTER 1
- Technical Mathematics I
- Engineering Drawing
- Refrigeration Fundamentals and Tools
- Occupational Safety and Health Management
- Interpersonal Skills
- Amalan Islam di Malaysia / Religious Practices in Malaysia
- Co-curriculum I

YEAR 1 - SEMESTER 2
- RAC Installation, Commissioning and Troubleshooting
- Fabrication and Fitting
- Technical Mathematics 2
- Statics and Dynamics
- French I
- Competency English
- Pengajian Malaysia 2

YEAR 3 - SEMESTER 5
- ACRT, Capstone
- Tender and Documentation
- RAC Practical Installation
- Final Year Project
- Elective

DIPLOMA OF ENGINEERING TECHNOLOGY IN AUTOMOTIVE MAINTENANCE

PROGRAM CONTENTS

YEAR 1 - SEMESTER 1
- Technical Mathematics 1
- Engineering Drawing
- Electrical Principles
- Engine Fundamental
- Interpersonal Skills
- Amalan Islam di Malaysia / Religious Practices in Malaysia
- Co-curriculum I

YEAR 1 - SEMESTER 2
- Computer Assisted Design AutoCAD
- Engine Technology
- Technical Mathematics 2
- Pengajian Malaysia 2 / Bahasa Melayu
- Kemunikais 1
- Competency English
- French I

YEAR 3 - SEMESTER 5
- Comfort, Safety and Info System
- Auto Assessment and Performance Test
- NOV Installation and Maintenance
- Elective
- Final Year Project

YEAR 3 - SEMESTER 6
- Industrial Training