UNDERGRADUATE PROGRAMME

MJII as the preferred Japanese oriented education hub in engineering, technology and international business in South East Asia

APPLY ONLINE
http://smart.utm.my
BACHELOR OF ELECTRONIC SYSTEM ENGINEERING

Electronic Systems Engineering is a broad engineering field that encompasses many subfields including those that deal with power, instrumentation engineering, telecommunications, semiconductor circuit design, and many others.


CAREER OPPORTUNITIES

Graduates from this programme can be employed as production engineers, instrumentation engineers, maintenance engineers, design engineers, sales/marketing engineers or pursue postgraduate degrees.

They are not easily but high chances in Japanese industries and companies since they have acquired appropriate knowledge, experience and Japanese working culture while studying at MJIT.

PROGRAM MODULES

Semester 1
Programming For Engineer
Fundamental of Electrical Circuits
Introduction To Electronic System Engineering
Engineering Mathematics I
Appreciation of Ethics and Civilisation
Graduate Success Attributes

Semester 2
Digital Electronics
Measurement and Instrumentation
Electrical Power System
Engineering Mathematics II
Japanese For Communication I
English Communication Skills
Co-Curriculum/Service Learning

Semester 3
Electronic Circuits
Digital System Design
Electronic Engineering Laboratory I
Engineering Mathematics III
Professional Ethics & Safety (Ningen-Ryoku)
Philosophy And Current Issue (Local Students Only)
Malay Language For Communication II (International Students Only)
Japanese for Communication II

Semester 4
Circuits and Signals
Electromagnetics
Electronic Engineering Laboratory II
Electronic System Engineering Statistics
Advanced Academic English Skills
Japanese for Communication III

Semester 5
Communication Electronics
Control System
Microprocessor and Microcontroller
Moringkuri Project
Numerical Methods
Introduction to Entrepreneurship
Extra-Curricular Experimental Learning (ExCEL)

Semester 6
Digital Signal Processing
Electronic Engineering Laboratory III
Integrated Design Project
Computer Architecture and Multimedia Technology
Artificial Intelligence
English for Professional Purposes

Short Semester
Industrial Training

Semester 7
Final Year Project I
Elective 1
Elective 2
Elective 3
Ningen Ryoku (Special Lecture)
The Thought of Science and Technology

Semester 8
Final Year Project II
Elective 4
Elective 5
Elective 6

*subject to change

DURATION OF STUDY
International students / 8 semesters (min)
Malaysian students / 8 semesters (min)

PROGRAMME
TOTAL CREDIT TO GRADUATE
SMJE
LOCAL
135
INTERNATIONAL
135

Terms and conditions apply
The Chemical Process Engineering program is offered to develop the engineers and scientists who can manage problems in construction and operation of complex systems such as energy production systems, chemical plants, food processing systems, biological processes or problems in environmental conservation.

The students will be taught the relevant skills and technologies to find problems in complex systems. The Chemical Process Engineering program provides education on chemical engineering, transport phenomena, fluid mechanics, thermodynamics, reaction kinetics, system control, optimization theory or so on.

Students in this program will acquire the fundamental knowledge and practical skills through lectures and laboratory experiments.

**Career Opportunities**

Graduates from this program can seek employment opportunities as process engineers, design engineers, chemical engineers, research engineers, technical sales engineers, commissioning engineers, service engineers in the chemical and biochemical industry, the oil and gas industry, the water and waste water treatment industry, the power station, the food industry, the pharmaceutical industry, the electronic industry, the heavy industry etc.

Graduates of this program will also be prepared for entry into post graduate education either in MJJIT or other universities worldwide.

**Program Modules**

**Semester 1**
- Introduction to Chemical Process Engineering
- Engineering Mathematics I
- Engineering Drawing With CAD Programming for Engineers
- English Communication Skills
- Malay Language For Communication I
- *Introduction to Entrepreneurship (International Students Only)*

**Semester 2**
- Organic Chemistry I
- Thermodynamics
- Engineering Mathematics II
- Japanese for Communication I
- Advanced Academic English Skills
- Professional Ethics, Safety & Health (Ningen-Ryoku)
- Graduate Success Attributes

**Semester 3**
- Organic Chemistry II
- Mass and Energy Balance
- Engineering Mathematics III
- Japanese for Communication II
- Analytical Chemistry
- Fluid Mechanics
- Philosophy And Current Issue

**Semester 4**
- Organic Chemistry/Analytical Lab
- Chemical Process Engineering Laboratory I
- Physical Chemistry for Chemical Engineer
- Chemical Engineering Thermodynamics
- Transport Phenomena
- Engineering Statistics
- Japanese for Communication III
- Co-Curriculum/Service Learning

**Semester 5**
- Separation Processes I
- Chemical Kinetics and Reactor Design
- Process Control and Instrumentation
- Chemical Process Engineering Laboratory II
- Numerical Methods for Chemical Engineer
- Fundamentals of Microbiology and Biotechnology
- Appreciation of Ethics and Civilizations

**Semester 6**
- Separation Processes II
- Introduction to Environmental Engineering
- Chemical Process Engineering Laboratory III
- Chemical Process Engineering Laboratory IV
- Material Sciences
- Process Economics & Project Management
- English for Professional Purposes
- Extra-Curricular Experiential Learning (ExCEL)

**Short Semester**
- Industrial Training

**Semester 7**
- Final Year Project I
- Chemical Process Design
- Process Safety and Health
- Elective 1
- Elective 2

**Semester 8**
- The Thought Of Science And Technology
- Final Year Project II
- Chemical Plant Design Project
- Elective 3
- Elective 4

*subject to change

**Duration of Study**
- International students: 8 semesters (min)
- Malaysian students: 8 semesters (min)

**Programme**

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<td>Local: 137</td>
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BACHELOR OF MECHANICAL PRECISION ENGINEERING with honours

Mechanical Precision Engineering program was designed for students who wish to acquire a solid foundation in mechanical engineering with deep knowledge of the principles and practice of precision engineering.

Precision engineers utilize the principles of precision engineering, applied physics, mechatronics and manufacturing to help transfer new technologies, discoveries, inventions into machines or products that satisfy demanding accuracy, repeatability and speed requirements.

Elective courses offered are Nano and Micro Technology, Robotics and Mechatronics and Advanced Processing Technology.

CAREER OPPORTUNITIES

Graduates from this program can be employed in positions within classical and emerging fields such as Mechatronics, Micro/Nanomanufacturing, Automotive, Aerospace, Atomic/Molecular Metrology, Micro/Nano-scale Machine & Instrument Design.

Graduates of this program will also be prepared for entry into post graduate education.

DURATION OF STUDY

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<tr>
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PROGRAM MODULES

**Semester 1**
- Engineering Drawing With CAD
- Experimental Method
- Statics
- Engineering Mathematics I
- The Thought Of Science And Technology
- Graduate Success Attributes
- Japanese For Communication I

**Semester 2**
- Programming for Engineers
- Dynamics
- Materials Science
- Appreciation Of Ethics And Civilisations *(Local & International Students)*
- Japanese For Communication II
- Solid Mechanics
- Workshop Practice
- Introduction to Entrepreneurship

**Semester 3**
- Fluid Mechanics
- Fundamental of Electrical Engineering
- Co-Curriculum/Service Learning
- Engineering Mat hematics II
- English Communication Skills
- Introduction to Design
- Applied Solid Mechanics

**Semester 4**
- Manufacturing Processes
- Thermodynamics
- Laboratory I
- Electronics
- Ningen-Ryoku (Professional Ethics, Safety & Health)
- Engineering Mathematics III
- Applied Fluid Mechanics

**Semester 5**
- Engineering Component Design
- Laboratory II
- Numerical Method
- Applied Thermodynamics and Heat Transfer
- Malay Language For Communication II *(International Students Only)*
- Japanese for Communication III
- Advanced Academic English Skills
- Philosophy and Current Issue *(For Local Students)*

**Semester 6**
- Integrated Design Project
- Mechanics of Machines and Vibration
- Control Engineering
- Engineering Statistics
- CNC CAD / CAM
- English for Professional Purposes
- Extra - Curricular Experiential Learning (ExCEL)

**Short Semester**
- Industrial Training

**Semester 7**
- Final Year Project I
- Monozukuri Project
- Mechatronics
- Modeling and Simulation
- Elective I

**Semester 8**
- Final Year Project II
- Elective II
- Elective III
- Elective IV

*subject to change

Software Engineering uses an engineering approach in the development, operation, and maintenance of large scale software.

A software engineer needs to be able to employ systematic technical and management methods in the creation of high-quality software.

The Bachelor of Computer Science specializing in Software Engineering is designed to support the nation’s need for professional and capable software engineers to undertake the task of increasing the effectiveness and performance of both the public and private sectors.

To further support this goal, the course is closely associated with the Malaysian Software Testing Board (MSTB) certifications and Hewlett-Packard (HP) Software Testing Program.

**CAREER OPPORTUNITIES**

Graduates of the program can work as a Software Engineer, Software Project Engineer, Systems Analyst, Systems Engineer, Software Quality Engineer, Software Configuration Engineer, Software Architect, Software Process Engineer, Software Test Engineer, Software Maintainer, Academician, Researcher, and Software Designer.

Graduates of these programs will also be prepared for entry into postgraduate education either in MJIT or other universities worldwide.

**DURATION OF STUDY**

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**PROGRAM MODULES**

**Semester 1**
- Discrete Structure
- Programming Technique I
- Digital Logic
- Technology & Information System
- Graduate Success Attributes
- The Thought of Sciences and Technology
- Malaysia Language for Communication *(International Students Only)*

**Semester 2**
- Computational Mathematics
- Probability & Statistical Data Analysis
- Programming Technique II
- Computer Organisation and Architecture
- English Communication Skills
- Philosophy And Current Issue *(Local Students Only)*

**Semester 3**
- Database
- System Analysis and Design
- Data Structure and Algorithm
- Network Communications
- Human Computer Interaction
- Appreciation of Ethics and Civilization *(Local & International Students)*
- Service Learning Co-curriculum Elective

**Semester 4**
- Software Engineering
- Web Programming
- Operating Systems
- Object Oriented Programming
- Academic Communication Skills
- Elective Courses - Choose 1
  - Requirements Engineering & Software Modelling
  - Software Project Management

**Semester 5**
- Professional Communication Skills
- Foreign Language Elective
- Extracurricular Experiential Learning
- Elective Courses - Choose 4
  - Applications Development
  - Artificial Intelligence
  - Internet Programming
  - Software Design & Architecture

**Semester 6**
- Software Engineering Project I
- Theory of Computer Science
- Elective Courses - Choose 4
  - Software Quality Assurance
  - Computational Intelligence
  - Mobile Application Programming
  - Special Topic in Software Engineering
  - Web Technology

**Semester 7**
- Industrial Training (HW)
- Industrial Training Report

**Semester 8**
- Software Engineering Project II
- Technopreneurship Seminar
- Introduction to Entrepreneurship
- Elective Courses - Choose 2
  - Software Construction
  - Real-Time Software Engineering
  - Agent-Oriented Software Engineering

*Terms and conditions apply.*
**TESTIMONIAL STUDENTS**

It was a great 4 years journey at Malaysia-Japan International Institute of Technology (MJIIT). The subject offered meet industry requirement. Foreign and local lecturers are really friendly. Only in MJIIT you have a high chance to go to Japan. Study hard, grab a chance if you see one, build your soft skills and you will become successful in future.

**MR. ABDUL SYAKIR BIN ABDUL WAHAB**  
(Consort 3, Class of 2018)  
Production Executive  
SAF PETRONAS Chemicals Sdn Bhd

http://mjiit.utm.my

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**Malaysia-Japan International Institute of Technology (MJIIT)**  
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