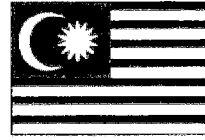
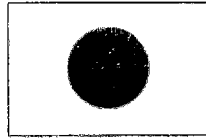


## 資 料

### 日本・マレーシア技術学院関係資料

- 1 .日本・マレーシア技術学院パンフレット
- 2 .短期研修コース案内書
- 3 .第4回合同調整委員会(2000年5月24日開催)議題
- 4 .第3回合同調整委員会(1999年7月10日開催)議事録
- 5 .技術相談事業に係るプロポーザル

1. 日本・マレーシア技術学院パンフレット



Welcome To

**JMTI**



Japan-Malaysia Technical Institute (JMTI)  
Institut Teknikal Jepun-Malaysia  
日本・マレーシア技術学院  
日本馬來西亞技術学院

## BACKGROUND

Since the late 1980's the Malaysian economy experienced rapid and continued growth until before the Asian financial crisis began in mid-1997, owing to the successful government efforts for attracting foreign investment. Faced with intensifying shortages of manpower and increasing dependency on foreign labour, however, the government changed its policy focus onto the development of a high-tech and labour-saving economy in the early 1990's. In the Seventh Malaysia Plan (1996-2000) more emphasis has been placed on restructuring of the country's manufacturing sector by encouraging foreign investment in high-tech areas and upgrading of the skill levels of its workforce.

A Human Resource Development Plan has been formulated so as to meet the manpower demand and requirements of this sector and to train more workers for high-tech jobs. In line with government policy, the Manpower Department under the Ministry of Human Resources has taken positive steps to achieve targets of the Plan by establishing new Advanced Technology Training Centres (ADTEC), among which is the Japan-Malaysia Technical Institute (JMTI).

In 1993 the Malaysian Government's proposal to establish JMTI was conveyed to the Japanese Government. In August of the next year, then Japanese Prime Minister Mr. Murayama visited Malaysia in his tour of ASEAN countries and promised to his Malaysian counterpart, Datuk Seri Dr. Mahathir Mohamed that the Japanese Government would cooperate to materialize the proposal. Subsequently a Technical Cooperation Accord for the establishment of JMTI was concluded and signed by representatives of both governments in 1997. Thus technical cooperation based on the Accord started in January 1998 as a government-to-government Project extending over the next five years.

JMTI is sited on a plot of land at Bukit Minyak Industrial Park in the state of Penang, a centre of the electronics industry in this country, and the land (with an area of 6.5 hectare) was donated by the State Government in 1997 through Penang Development Corporation (PDC).

## SPECIAL FEATURES

JMTI is featured by the provision of a wide range of services making use of professional

expertise of several Japanese veteran consultants in the relevant fields, Malaysian instructors trained in Japan and state-of-the-art training equipment donated by the Japanese Government. The services cover diploma courses for high-school leavers, part-time technical and supervisory courses for company employees as well as technical consultancy for SMI managers. The content of the services is to be frequently reviewed and adjusted to industry's needs by a Technical Advisory Committee comprising academicians and industry representatives who are familiar with actual trends in industry. All students on diploma courses are given Japanese language training, through which they learn Japanese work ethics and discipline.

## OBJECTIVES

The primary objective of JMTI is to produce highly skilled industrial technologists in the fields of advanced technology in manufacturing, electronics, computer and mechatronics. In addition, JMTI aims to assist in the development of local industries, particularly SMIs, through provision of supervisory and continuous skill training for their employees and individual technical consultancy services for their entrepreneurs and managers.

## FUNCTIONS

To achieve these objectives, JMTI carries out the following functions:

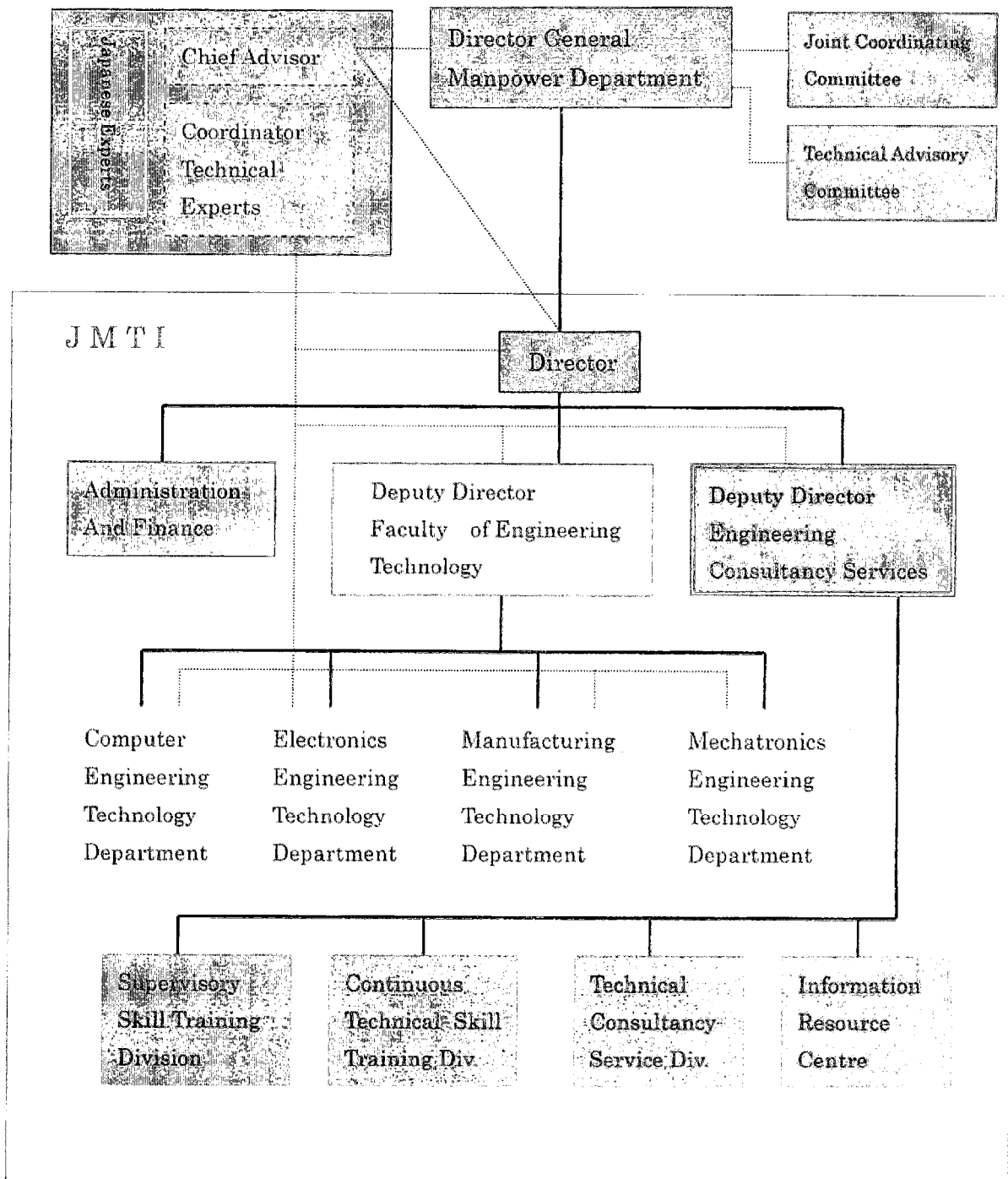
- (a) Three-year full-time training of high-school leavers (diploma courses) in the fields of
  - manufacturing, electronics, computer and mechatronics engineering technology;
- (b) Part-time/short-time training courses for company employees in such fields;
- (c) Courses, workshops and seminars in supervisory skill, employee-training techniques, productivity matters, etc. for supervisors and managers;
- (d) Individual consultancy and advisory services to SMI operators on specific technical matters.

## ORGANIZATION

Out of the above-mentioned JMTI functions, diploma courses and short-time technical training courses for company employees are carried out by the four Departments under

the Faculty of Engineering Technology, which is to be staffed by a total of 158 Malaysian instructors and administrative personnel, while the Engineering Consultancy Services fulfills functions other than these courses.

### Organization Chart



Under the Technical Cooperation Accord the implementing bodies of the JMII Project are the Manpower Department(JTR), Ministry of Human Resources, Malaysia, and the Japan International Cooperation Agency (JICA) which assigns a Chief Advisor, a Coordinator and Technical Experts to the Project.

The Director General of JTR bears overall responsibility for the administration and implementation of the Project as the Project Director and the Director of JMII is responsible for managerial and technical matters of the Project as the Project Manager, while the Japanese Chief Advisor gives necessary recommendations and advice to the Project Director and the Project Manager on any matters pertaining to the implementation of the Project, and the other Japanese experts, to their Malaysian counterpart staff on technical matters.

## DIPLOMA COURSES

### COURSE DURATION

The total training time is 4,200 hours spreading over three (3) years.

### ANNUAL STUDENT INTAKE

A total of 200 comprising 50 for each of the four Departments.

### ENTRANCE QUALIFICATIONS

A Malaysian citizen aged below 26 years and having acquired one of the following certificates will be qualified to apply for participation in a course:

- (a) Malaysian Certificate of Education (SPM)/ Malaysian Certificate of Education (Vocational);
- (b) Malaysian Skills Certificate (SKM) level 2 or 3 in a related field, or any equivalent Vocational Certificate; or
- (c) Equivalent certificate from a Polytechnics or Technical College with knowledge and skills in related fields.

\* A student with either qualification (b) or (c) as mentioned above who has been successfully admitted to a JMII course is allowed to proceed to the second year of training.

## COURSE FEES

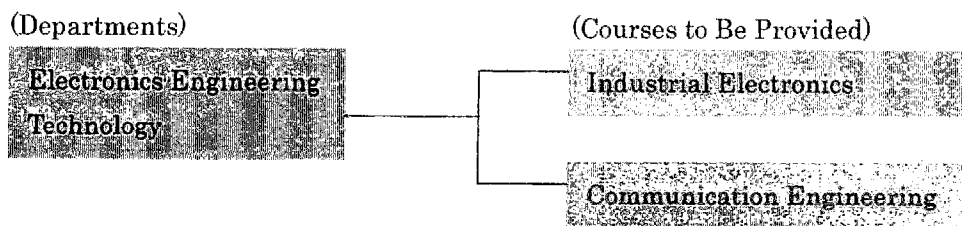
- (1) Tuition: RM3,000 annually
- (2) Hostel charges (including meals): RM 2,000 annually if the student stays at the hostel

## ACHIEVEMENT CERTIFICATION

A student who has successfully completed a diploma course will be awarded a Diploma of Technology in the relevant field, which is considered as equivalent to a Malaysian Skills Certificate (Level 4) of the National Vocational Training Council or any industrial diploma of a higher-level vocational institution.

## TYPES OF DIPLOMA COURSES OFFERED

The four Departments provide eight specialised diploma courses as mentioned below:



### ◇ Training Objectives

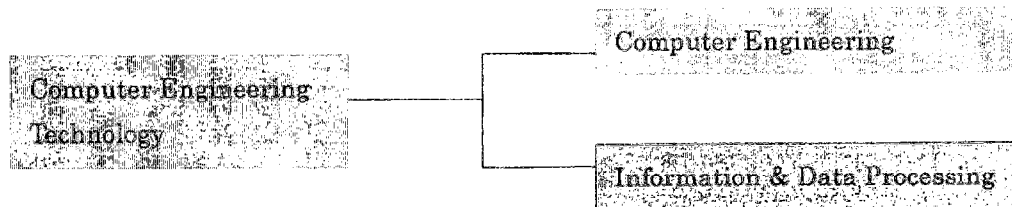
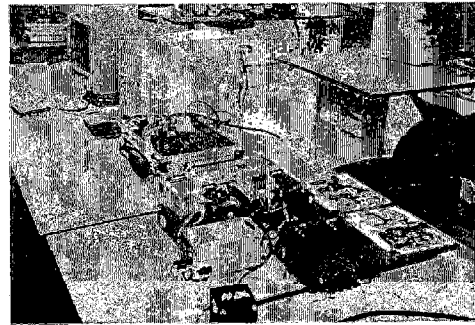
- ▶ To give trainees basic knowledge and skills in electronic circuits;
- ▶ To give trainees a wide exposure in computer technology, sensor technology, design techniques, and PCB manufacturing techniques using CAD;
- ▶ To teach trainees on maintenance and upgrading of electronic circuits in production line.

### ◇ Upon completion of training, trainees will be able to

- ▶ Use CAD to design electronic circuits;
- ▶ Design systems using Programmable Logic IC Family;
- ▶ Know principles of computers, develop software and assemble computers;
- ▶ Measure electronic circuits and analyze data;
- ▶ Develop comprehensive systems and data communication network;
- ▶ Apply various PLC and sensors to control production line and perform maintenance work.

◇ List of major equipment:

- ▶ Electronics circuit experimental equipment
- ▶ Electronics measurement system
- ▶ PCB CAD design system
- ▶ Programmable logic device, field programmable gate array design system
- ▶ Equipment for data processing
- ▶ Programmable logic controller
- ▶ Sensor experimental equipment
- ▶ Data communication experimental equipment

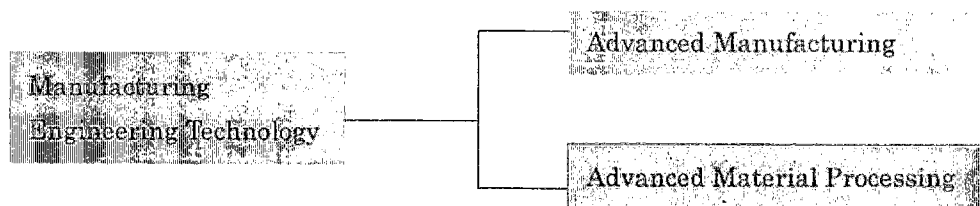


◇ Training Objectives

- ▶ To teach trainees the knowledge and skills in computing;
- ▶ To ensure trainees are competent in techniques of developing software, communicating data, and processing data;
- ▶ To design and develop computer systems and production lines.



- ◇ Upon completion of training, trainees will be able to
  - ▶ Develop application software in a Windows environment;
  - ▶ Know the functions and structure of personal computers and do computer maintenance;
  - ▶ Develop and assemble network systems and RDB systems;
  - ▶ Create digital computer graphic and build graphic data system;
  - ▶ Design, build and prepare server client model system.
  
- ◇ List of major equipment
  - ▶ PC hardware training system
  - ▶ PC programming training system
  - ▶ Network training system
  - ▶ Database training system
  - ▶ Software developing system
  - ▶ Visual data processing training system
  - ▶ Server client model training system



- ◇ Training Objectives
  - ▶ To teach basic skills and knowledge in mechanics and machining;
  - ▶ To enhance trainees' skills in using new technology, equipment and CAD/CAM/CAE/CAT software;

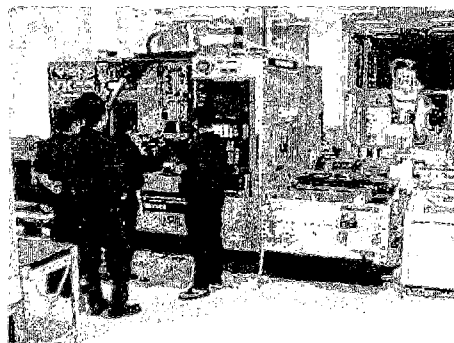
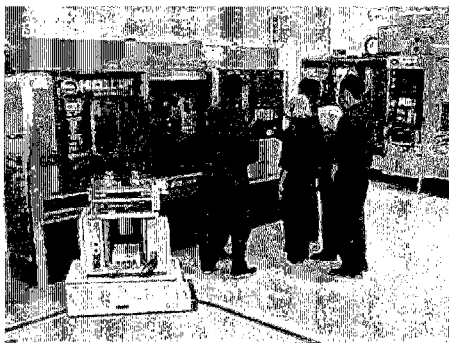
- ▶ To plan, design and operate production line;
- ▶ To apply production management technique.

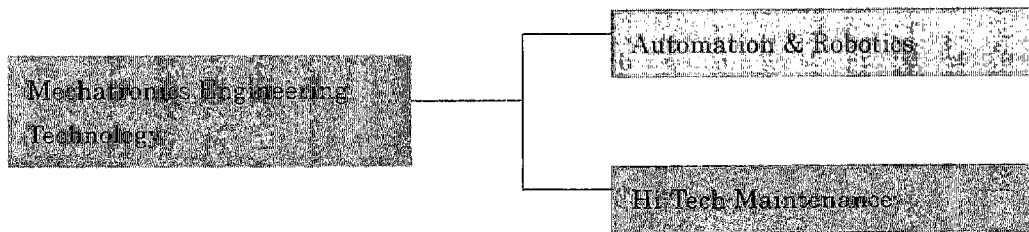
◇ Upon completion of training, trainees will be able to

- ▶ Operate CNC machines, and do related works such as programming, handling, and maintaining of CNC machines ;
- ▶ Perform lathe and milling and grinding works with high precision ;
- ▶ Use 3D CAD/CAM/CAE/CAT system in design analysis and manufacturing ;
- ▶ Apply production management principles in real situation ;
- ▶ Plan, design, and operate production line (Flexible Manufacturing System : FMS).

◇ List of major equipment

- ▶ Conventional machine tool
- ▶ CNC machine tool (Grinding center, Turning center, Machining center, CNC wire cut, CNC die sinking EDM)
- ▶ 3D coordinate measuring machine (CMM)
- ▶ Surface and shape tester
- ▶ 3D CAD/CAM/CAE/CAT system Equipment
- ▶ Simulator for production
- ▶ Production management system
- ▶ Production line (FMS)





◇ Training objectives

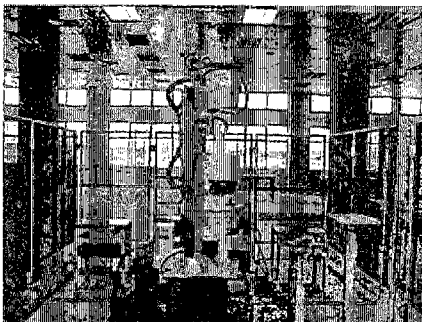
- ▶ To teach basic mechanical and electronic engineering;
- ▶ To teach controls using pneumatic, hydraulic, computer, and electro-servo system;
- ▶ To run latest control technology, maintenance method, detection and analysis of problems, and method to improve production line.

◇ Upon completion of training, trainees will be able to

- ▶ Install, measure, and analyze automatic equipment;
- ▶ Use basic skills in mechanics, machining, and control of machines;
- ▶ Design and apply electro-pneumatic, electro-hydraulic and electro-servo system;
- ▶ Design and apply diagnosis system;
- ▶ Perform maintenance work and improve production line.

◇ List of major equipment

- ▶ Electro-pneumatic system
- ▶ Electro-hydraulic system
- ▶ Industrial robot
- ▶ Diagnosis system
- ▶ Process control system



## CONTRIBUTIONS BY THE JAPANESE GOVERNMENT

(a) Assignment of long-term Japanese experts to be supplemented with an unspecified number of short-term Japanese experts from time to time:

- ▶ A Chief Advisor;
- ▶ A Project Coordinator;
- ▶ An Expert in Training Planning;
- ▶ An Expert for each of the four Departments;
- ▶ An Expert for Engineering Consultancy Services (yet to be assigned);
- ▶ A Japanese Language Teacher (senior volunteer).

(b) Training of Malaysian Vocational Training Officers (Instructors) in Japan.  
(about 20 officers annually)

(c) Provision of State-of-the-Art Training Equipment:

(Only main equipment referred to below)

- ▶ Flexible Manufacturing System;
- ▶ Industrial Robots;
- ▶ Diagnosis System;
- ▶ Automatic Measuring System.

## COMMITMENT OF THE MALAYSIAN GOVERNMENT

(a) Provision of Infrastructure

- ▶ Land and Buildings
- ▶ Facilities
- ▶ Conventional Training Equipment

(b) Staffing

- ▶ 143 Vocational Training Officers
- ▶ 15 Supporting (Administrative) Staff

(c) Allocation of Operational Budget

## CONTRIBUTIONS EXPECTED OF INDUSTRY

- (a) Provision of Opportunities for Hands-on Training of JMTI Instructors and Trainees on the Shop Floor
- (b) Employment of JMTI Training Finishers
- (c) Advising JMTI on Technical Matters in the Light of Industry' Needs.

## FOR FURTHER INQUIRY

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