



THE HONG KONG  
POLYTECHNIC UNIVERSITY  
Industrial Centre

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**Manufacturing Projects  
Timetable & Project Briefs**

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**BENG (HONS) DEGREE IN MECHANICAL ENGINEERING**

**43090 SF**

**2001**

The Hong Kong Polytechnic University

Industrial Centre

Manufacturing Projects

BEng DEGREE IN MECHANICAL ENGINEERING, HKPU  
43090 SF

(Summer 2001)

1. Project List

Proj. No.	Project Title	Supervisor
M11	Electrophoretic Coating System	Mr. F Lau
M12	Plastic Mould for Moving Cubes of the Universal Constructor	Mr. R Tam
M13	One-fifth Scaled Centre Lathe	Mr. CH Yu
M14	Automatic Coil Feeding Reel for Power Press	Mr. HM Leung
M15	Automatic Packaging System	Mr. CK Lai
M16	Electronic Pet	Mr. R Cheng
M17	Manufacturing of a Plastic Injection Mould	Mr. SL Chan

## 2. Staff contacts

<b>Supervisor</b>	<b>Room</b>	<b>Telephone</b>
Mr. CH Yu	U401e	2766 7612
Mr. SL Chan	W106	2766 7616
Mr. R Tam	W501d	2766 7607
Mr. R Cheng	U204d	2766 7628
Mr. HM Leung	W105	2766 7605
Mr. CK Lai	W402h	2766 7627
Mr. F Lau	W401f	2766 7615

## 3. Project Allocation

<b>GROUP NO.</b>	<b>PROJECT TITLE</b>	<b>STUDENT NAME</b>
M11	Electrophoretic Coating System	CHAN Chak On CHENG Wang Chow LAM Choi Ling Coriolanus LEUNG Chi Fai TANG Siu Ling YIM Ka Kit
M12	Plastic Mould for Moving Cubes of the Universal Constructor	CHAN Chun Kit CHEUNG Chi Fai LAM Chun Wah LEUNG Cho Tim WAN Kwok Pun YIP Hok Sum
M13	One-fifth Scaled Centre Lathe	CHAN Kai Tai CHIU Ming Yan LAM Ho Ching LEUNG Kwan Kit WONG Chi Hang YU Ka Nin

GROUP NO.	PROJECT TITLE	STUDENT NAME
M14	Automatic Coil Feeding Reel for Power Press	CHAN Kim Fan FOK Kiu Wai LAM Sui Kei Kenny LIU Shek Ming WONG Hok Wai <del>CHAN Wai Hong</del>
M15	Automatic Packaging System	CHAN Ting On FUNG Chi Shing LAW Man Suen MAK Sui Shing Adolf WONG Pui Fun <del>CHENG Chi Keung</del>
M16	Electronic Pet	CHAN Wai Cheong FUNG Pei Lee LEE Sai Ho POON Siu Chung WONG Wai Kit <del>LAM Wai Wing</del>
M17	Manufacturing of a Plastic Injection Mould	CHAN Wai Yuen KWOK Hoi Wa LEE Tak Lun Alan TAI Chun Man YEUNG Koon Ho <del>LAM Wai Yu</del>

#### 4. Project Timetable

The IC operates 5 days a week from 0830 to 1700. Normal project days in the summer are from Monday to Thursday. In these project days, you have to follow the IC timetable and sign in/out from your supervisor's office. Friday is not a normal project day but you may at your discretion to work at your own pace. You should observe the IC rules related to timekeeping during the timetabled project periods.

During the timetabled project periods (ie Monday to Thursday), facilities will be available for manufacturing activities. It is anticipated there will be a high demand for the use of equipment in some of the workshops. You are therefore requested to plan your work carefully and make your booking in advance (normally 3 days). Any urgent requests should be made to the Unit In-charge of the Shop in which the work is to be done.

Work after 17:00 is not encouraged. You are advised to plan and monitor your progress carefully. However, if it is found that the projects cannot be completed on time, you have to make your own arrangement with your supervisor and the Unit In-charge on overtime work. It is better to work on a tight schedule at the early stage of the project in order to avoid any last minute rush.

Students are reminded that the project must be completed before making the presentation.

	<b>ACTIVITIES</b>	<b>LOCATION</b>	<b>DURATION</b>
1	Induction	U401a, IC	13:30-15:15 Fri, Week 28
2	Detailed design and planning	Design Office, IC	Week 28-36 Every Friday(P.M.)
3	Machining, fitting and Fabrication	Machine Shops, IC	Week 49
4	Heat-treatment, welding and electro-plating	Ground Floor, IC	Week 50
5	Assembly, testing and Commissioning	Project Shops, IC	Week 51
6	Preparation for presentation	Project Shops, IC	Week 52
7	Presentation	IC Common Room, W502d, IC	08:30-17:00 Thursday, Week 52

## 5. Headquarters for students

Project headquarters for meetings, assembly and testing work are allocated as follows:

<b>Group</b>	<b>PROJECT TITLE</b>	<b>HEADQUARTER</b>
M11	Electrophoretic Coating System	W401
M12	Plastic Mould for Moving Cubes of the Universal Constructor	W501
M13	One-fifth Scaled Centre Lathe	U401
M14	Automatic Coil Feeding Reel for Power Press	W001
M15	Automatic Packaging System	W402
M16	Electronic Pet	U204

M17	Manufacturing of a Plastic Injection Mould	W004
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## 6. Points to be noted by MU project students

### 6.1 Safety Matters

You are required to discuss with your supervisor any potential hazards that may be associated with the project.

Suitable safety shoes and aprons are to be worn at all times while working in the IC workshops.

Safety precautions are to be taken in all workshop operation/processes, assembly and trial tests. (Your project supervisor will assess your working methods as part of the project assessment.)

### 6.2 Progress Report

Daily Report - It is expected that you will keep in contact with your supervisor and report to him the daily progress of your work.

Weekly Report - Weekly formal meetings are to be held with your supervisor. The meetings are to be chaired by a leader and minutes should be taken by a secretary nominated by the group.

Project Dairy - You are strongly advised to keep a daily project diary of what has been done during the day. This would help you in preparing your final report as well as the presentation at the end of the project.

### 6.3 Materials

Your Supervisor will advise you on this matter. Usually materials can be obtained from the IC store. You have to complete a Material Requisition Form giving details of the material/part you want. The MRF has to be signed by your supervisor before drawing material from the store.

A minimal sum of petty cash is made available for the purchase of small items below HK\$500. The cost of bought out parts/material can be refunded only when the following conditions are met:

- a. Prior approval is obtained from your Supervisor before the material is purchased.
- b. Valid purchasing receipts are provided.
- c. The receipts must clearly indicate the cost, proper description of the items (in English) and the title of the project.

Stationary, photos and slides for the project presentation/report are to be borne by the students. You should make your own plan in taking photos/slides in the course of manufacturing.

### 6.4 Booking of Facilities

The IC-S1 Form "Application for IC Facilities" is to be used for booking workshops facilities. Before booking, you should consult the Unit Leader concerned to check whether

the equipment will be available at the time required.

The form should be endorsed by your supervisor and it should be submitted to the Unit Leader concerned 3 days in advance. Should you have any urgent request for equipment booking, you should put it through your Supervisor who will make special arrangement for your request.

At least 1 lathe and 1 milling machine will be allocated for each project group in the Basic Machine Shop or the Toolroom for the manufacturing of parts. Any special machine such as CNC, grinding machine, boring machine can be booked through the relevant section leader.

#### **6.5 Use of CAD Facilities**

Detailed drawings are to be done in the IC CAD Rooms as allocated by your supervisor.

You are not allowed to bring any floppy diskettes into the IC CAD Rooms. If drawing data backup is required, you must bring along several new floppy diskettes with your name printed on each diskette and pass them to a designated DO staff/TA who will format the floppy diskettes for you. It should be noted that no floppy diskette is allowed to be used in the Design Office except those formatted by the DO staff. All these floppy disks should be returned to the DO after each day's work.

You are not allowed to access any software except that for CAD purposes. Unauthorised access to IC computers is not allowed except those specifically assigned by DO staff.

You have the responsibility to tidy up the workplace after use.

#### **6.6 Project Presentation**

This is an important part of the project. You are reminded to leave sufficient time for the preparation of the presentation. Good planning would usually help.

#### **6.7 Marking Scheme**

The marking scheme consists of two parts - the project and the presentation.

#### **6.8 Final Report**

You have to hand in a final report within 2 weeks upon completion of the project.