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3. **INTRODUCTION TO MSC IN ENGINEERING BUSINESS MANAGEMENT & MANUFACTURING SYSTEMS ENGINEERING**

3.1 **Introduction to the IGDS**

Achieving the status of a World Class business demands fundamental changes in any organisation. Amongst the strongest drivers for change in today's business environment are:

- new ideas in business and operations management;
- technological advances; and
- different ideas on managing people, with an emphasis on teamwork.

These factors place new demands and new emphases on human resources. We now need broader people, more developed people. We also need a management population who are willing and able to manage change. Management of change requires a variety of different roles. Top management must set the strategy. Experienced middle managers must have the necessary understanding properly to contribute to a change programme, and thus play a full part in making it succeed.

But there is a prime need for the best young brains as agents of change, to provide a fresh, innovative impetus. To meet this need, the joint University of Warwick and Hong Kong Polytechnic University Masters of Science in Engineering Business Management and Manufacturing Systems Engineering were designed from the start to provide training and education of a high academic standard which is relevant to modern manufacturing and engineering industries. In addition, more specialist education and training can be gained through the University of Warwick Postgraduate Awards in Electronic Business Management, Quality & Reliability and Supply Engineering & Logistics, which are also available through the Warwick/ Hong Kong PolyU programme.

3.1.1 **Aims**

The aim of the Scheme is to develop the leaders of change and business improvement in engineering and manufacturing companies. It achieves this through broad-based vocational postgraduate education, providing a thorough understanding of the key elements of business and technology including:

- the engineering business environment and strategic management;
- management of engineering and manufacturing operations;
- technologies in engineering, product and manufacturing design;
• capabilities, trends and applications of information technology.

This approach provides the benefits of integration and cross-fertilisation between functional specialists, companies, and industrial sectors.

3.1.2 Companies involved

The scheme was started in 1981 as the pioneering Integrated Graduate Development Scheme (IGDS), by the University of Warwick, BL Cars (now Rover Group) Lucas and Rolls-Royce. These firms remain as users of the scheme although the partnership has now expanded to encompass many more blue-chip manufacturing and engineering companies.

In 1990 the programme was extended to Hong Kong, and now also operates in other parts of P.R.C., Malaysia, India, South Africa and Thailand.

3.1.3 Participants

Participants are either graduate in an engineering or science discipline, or graduate equivalent from other disciplines with significant work experience. All are expected to have relevant work experience, and to fit the profile of a manager or technical professional with balanced business and engineering/technical capabilities - either currently or potentially. The numbers of participant on scheme have grown rapidly around the world today.

3.1.4 Linkages

The MSc programme at Warwick and the PolyU consists of another main qualification. Warwick's Engineering Doctorate (EngD) programme draws on Masters modules and is fully integrated to allow credit transfer from the MSc into the EngD.
3.2 Scheme Management

There are three main levels of control, which ensure the academic standards of the course, its individual relevance and its effective operation:

(a) The Universities’ Examination Board whose primary role is to ensure that the course achieves the high academic standards expected of a post-graduate course at British and Hong Kong universities.

(b) The Liaison Committee which is made up of representatives from both Universities, and which maintains operational control of the scheme. In particular, it:
   i) Reviews the syllabus, and initiates revisions where appropriate.
   ii) Monitors and reviews the Scheme's operation, and initiates actions when necessary.

(c) Working Parties in which new modules are designed and current ones regularly reviewed. They consist of the Module Tutors, the Programme Management and specialist representatives from the participating companies.

Companies also have a key responsibility for student monitoring to ensure they are both attaining the standards required for the qualification, AND applying what they learn from the course in their company role.

Through this full involvement of partner companies in the management, development, delivery and monitoring of the Scheme, maximum value to both the participants and their companies is ensured.

3.3 Structure and Regulations

The Integrated Graduate Development Scheme in Hong Kong is a modular based programme which can lead to any of:

- M.Sc. or Postgraduate Diploma in Engineering Business Management
- M.Sc. or Postgraduate Diploma in Manufacturing Systems Engineering

*The above are awarded jointly by the University of Warwick and the Hong Kong Polytechnic University,*

- M.Sc., Postgraduate Diploma, Postgraduate Certificate or Postgraduate Award in Engineering Business Management
- M.Sc., Postgraduate Diploma, Postgraduate Certificate or Postgraduate Award in Manufacturing Systems Engineering
- Postgraduate Award in eBusiness Management
- Postgraduate Award in Supply Engineering and Logistics

*The above are awarded by the University of Warwick.*

The period of study for the MSc is normally 24 months at the end of which candidates should have completed all the requirements for the MSc degree. The maximum period of study is 36 months. The period of study for the Postgraduate Award is 12 months (maximum).

Course module attendance is typically at 7-8 week intervals, and is booked on the basis of "first-come, first-served", irrespective of company or function. Thus, attendees on any one module running are likely to represent a mix of industrial sectors and disciplines and stage in their programme.

Industrial involvement in developing and delivering the syllabus is extensive and of key importance. Company specialists play a major role in the design of modules, and again in the provision of "company sessions" during the module running. By the same token, company managers should assist in and approve the definition of individual participant's module selection. These provisions ensure that all programmes are personally and industrially relevant.

Assessment is based on in-module activities, post-module assignments and (for the MSc) an in-company project. There are no final written examinations, although in-module tests will play a part in the course-work assessment. After attendance at each module, participants undertake a related assignment aimed at practical application of the subject in their place of work, and the resulting reports are marked and assessed by a University tutor. Concurrently, each participant undertakes a major project identified and co-supervised by the company. Academic tutors and industrial managers jointly assess the projects and the resulting dissertations.

Around 30 subject modules are available, to all participants, although not all are offered every year. Each module consists of approximately 40 hours of lectures, tutorials, seminars and practical activity, which may be attended either as a block mode of study over 4 - 5 days or over a short period (1-2 weeks) during weekends and evenings. The module attendance is followed by 40 – 60 hours private study and the completion of an assignment; this is an integral part of the module and no credit is given without completion of this assignment. Successful completion of a module results in 10 CATS (Credit Accumulation & Transfer Scheme) points at level M.
### 3.4 Operating Regulations for MSc in Engineering Business Management and Manufacturing Systems Engineering

The general requirement for the MSc programmes is that participants complete and satisfy the examiners in at least 9 modules (90 CATS).

The requirements for the particular degrees are as follows:

<table>
<thead>
<tr>
<th>Degree</th>
<th>Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Business Management</td>
<td>A minimum of 9 modules of which 3 modules are designated Business and 6 modules are designated Engineering Technology or I.T./Other, and the project</td>
</tr>
<tr>
<td>Manufacturing Systems Engineering</td>
<td>A minimum of 9 modules of which at least 5 modules must be designated Engineering Technology and the project</td>
</tr>
</tbody>
</table>

(See Section on MSc Module Outlines for details of module designations)

In addition all candidates for the MSc must satisfy the examiners in the execution, dissertation and oral examination of an industrially oriented project. Each of the component parts of the course - course work and project - bear equal weighting.

In the case of outstanding performance by the candidate in both course work and individual project, the MSc may be awarded with Distinction. A distinction is awarded if candidates achieve a mark of 70% for BOTH the course work average and the project.

For the Postgraduate Diploma candidates must complete work equivalent to 120 CATS. This may be achieved through 12 modules, all of which must be passed, or through a combination of 6 satisfactorily completed modules PLUS project work equivalent to 60 CATS.

For the Postgraduate Certificate candidates must complete work equivalent to 60 CATS (i.e. complete and pass 6 modules).

For the Postgraduate Award (PgA) candidates must complete and pass work equivalent to 30 CATS. The requirements for the specific Postgraduate Awards are as follows:

#### 3.4.1 PgA in Engineering Business Management
Select at least 1 Business and at least 1 Engineering Technology or I.T./Other.

#### 3.4.2 PgA in electronic Business (eBusiness) Management
Global e-Business and e-Commerce modules, plus 1 elective from:
- e-Customer Relationship Management

1 Please note, not all the modules listed for in the above PgA regulations will be offered in Hong Kong; candidates for some of these modules may need to travel to the UK to undertake them.
- Enterprise Information Systems
- Information & Communications Technologies

3.4.3 **PgA in Supply Engineering and Logistics**
Awarded for three modules, of which at least 2 core modules from:
- Integrated Logistics Support
- Logistics and Operations Management
- Supply Chain Management

Plus 1 elective from the following modules or above core modules:
- Industrial Engineering for Business Improvement
- Quality Management and Techniques
- Project Planning Management and Control
- Simulation of Systems

Providing they had not previously been granted the maximum period of extension for the MSc, candidates registered for (and achieving) the Postgraduate Diploma, Certificate or Award, may re-apply for entry to a higher award, with credit within a fixed period (usually 2 years from completing the lesser award).

Candidates registered for the MSc but awarded a lesser qualification may NOT return with credit for a further MSc registration.

3.5 **Procedures for Upgrading of Registration to MSc Degrees**
Candidates who have initial registration for the Postgraduate Diploma should be aware that they will need to meet all the criteria for the MSc Regulations should they wish to be considered for upgrading of registration to MSc. Upgrading of registration from Postgraduate Diploma to MSc is NOT automatic. Participants will be monitored during the course and upgrading can take place at any time after the first year of registration, providing Post Module Assignments are submitted in a timely manner, the performance is above average and (most importantly) a suitable project is proposed and accepted by the University. Retrospective upgrading of the registration can be made at the Examination Board providing the student has satisfied the MSc Regulations.
3.6 Attendance

3.6.1 Course work consists of full attendance on modules and formal assessment of performance on those modules.

3.6.2 If you miss any proportion of a module you should submit the reason for your absence to the Director of Studies, IGDS/IMDS of the PolyU, in writing. You will be required to either re-attend the whole module, to make up the missed part of the syllabus, or you may be penalised in some other way.

3.6.3 Session presenters may refuse to allow admission to participants arriving late for their session. This will then be counted as an absence from a session and handled as in paragraph 2 above. A late register will be maintained for those arriving after the module session has started.

3.6.4 If you fail to attend prescribed classes or submit prescribed course work you may be required to withdraw from your Programme of study in accordance with the University Regulations Governing the Continuation of Registration (University of Warwick Regulation 13).

3.6.5 Attendance for a credit bearing module will only be credited on the submission of a non-trivial piece of Post Module Work. The judgement as to whether a piece of work is "non-trivial" will be at the discretion of the Module Tutor, but in general would require a mark of at least 20%.

3.7 Deadlines for Submission of Post Module Assignments

Post Module Assignments for assessment should be submitted to the IGDS/IMDS Administration Unit six weeks after your attendance on the relevant module.

The total time dedicated to any module should be 80-100 hours. Typically the time on the module itself accounts for about 40 hours and so a further 40-60 hours should be devoted to the Post Module Assignment.

If you are submitting your assignment by post, you should post it in time to arrive by the deadline; you are advised to gain proof of postage in the case late penalties applied due to postage delays. You would then be in a position to appeal against the application of late penalties - but only if you can demonstrate that you posted the work in good time to arrive under normal postal circumstances. Post module work will be date-stamped upon receipt, and that date will be taken as the submission date.
You should keep a copy of your assessed work, as the submitted copy will not be returned to you.

You should note that the penalties are applied for late submission and cheating.

Note  NON-SUBMISSION OF AN ASSIGNMENT OR THE SUBMISSION OF A TRIVIAL ASSIGNMENT WILL RESULT IN NO MODULE ATTENDANCE CREDIT BEING AWARDED. MODULE ATTENDANCES AND ASSIGNMENTS CONTRIBUTE 50% OF THE CREDIT TOWARDS THE MSc DEGREE.

3.8 Project Proposal Submission

Within 12 months of intake participants should identify a suitable major project and propose a suitable Industrial Supervisor. A synopsis of the proposal should be forwarded to the University for approval and appointment of an Academic Supervisor.

3.9 Project

Participants should prepare and submit the dissertation on the major project; within 3 years of date of initial registration.

They then need to satisfy the Examiners in an oral examination with the Industrial and Academic Supervisors after submission of the dissertation. The oral examination should normally take place within one month of submission of the dissertation. It is your responsibility, in consultation with your Academic Supervisor, to make the arrangements for the oral examination.

Note  THE PROJECT, DISSERTATION AND ORAL EXAMINATION CONTRIBUTE 50% OF THE CREDIT TOWARDS THE DEGREE OF MSc
3.10 **Late Submission Penalties**

If assessed work is submitted late, the following penalties will be incurred:

*For Post Module Work, 3% per working day will be deducted for late submission, for up to the work being two weeks (14 days) late, after which no credit will be awarded.*

*For Project Dissertation, 3% per working day late, will be deducted for late submission.*

In the event of special, major, circumstances, you may apply to the local Director of Studies (in writing, preferably by email) for an extension to the submission date of Post Module Assignment (see section “Dealing with Problems”). Non-trivial work that is submitted more that two weeks after the deadline may, at the discretion of the Director of Studies, be considered for attendance credit (only); candidates may write to the Board of Examiners (care of the Course Coordinator) explaining any mitigating circumstances if they wish the late penalty to be wholly or partially waived.

In the event of special, major, circumstances, the Academic Director of Graduate Studies may be applied to (in writing) for an extension to the submission date of the Project Dissertation. See section “Dealing with Problems” for details on procedures.

3.11 **Commitment Necessary from Participants**

3.11.1 *Registration*

a) Complete and provide the following admissions documentation:

- 2 copies of the University postgraduate application form (all sections should be completed, with especial reference given to section 23, your rationale for undertaking the course)
- Proof of qualification (photocopies of degree / diploma certificates and transcript, which should be authenticated as true copies of the original). Certificates of attendance for short training courses are NOT required.
- Evidence of your English proficiency if your mother tongue is not English and/or your Higher Education was undertaken in a language other than English.
- 2 references or letters of support (these must be from work and academic sources, NOT from family, personal friends etc). A short guide explaining how to write letters of support is attached as an appendix, if required.
- Enrolment form so you may be registered with Universities if your application is successful
b) There are 4 possible entry dates (counted from the start of the quarter in which the
candidate undertakes their first module):

- 1st January
- 1st April
- 1st July
- 1st October

End of registration for the MSc or Postgraduate Diploma is therefore 3 years later. For
example start of registration on 1st January 2008 would give end of registration on 31st
December 2010. Exceptionally, candidates for the Postgraduate Award (only) may register
from the start of the month in which they take their first module.

c) The full set of documentation will then be forwarded to the University for approval.

d) If you are accepted an offer letter will be sent to you via your local IGDS office.

Once you have received your offer letter you will be required to enrol on-line with the
University of Warwick and – in order to gain access to the University of Warwick’s on-line
facilities, register for an IT Services account (see relevant section in “Introduction to
University of Warwick). You will also be required to re-enrol at the start of each academic
year (i.e. September – even if you have only just enrolled for your first–part - academic year).

3.11.2 Attendance Plan

A complete attendance plan must include a minimum of 9 modules with typically 4-5 in year 1,
a further 3-4 in year 2 and the remainder in year 3.

There is a relatively free choice of modules available from the full list of modules contained in
the programme. However, due to scheduling constraints in overseas centres, there may be
some constraints on choice in any one year. The following can therefore only be used as a
guide to planning and module selection.

The following modules are most suitable for you to undertake in year 1:

- Applied Statistical Methods
- Financial Analysis and Control Systems
- Information and Communications Technologies
- Logistics and Operations Management
- Operations Strategy for Industry
- Organisations, People and Performance (previously titled Human Factors in Industry)
- Quality Management and Techniques
- Global e-business

When planning your module attendance, due consideration should be given to module pre-requisites, as outline in the individual module outlines.

### 3.12 Cheating and Plagiarism

3.12.1 Actions which weaken the educative process (such as shameless copying in the laboratory, drawing office or on computing tasks) or dishonest actions (such as quoting in essays or reports from books, handouts or the work of other students without explicitly stating that this is being done) are firmly discouraged in the Universities.

Senate of the University of Warwick has formulated a Regulation 11 about suspected cheating. Its section (B) concerns work not done under examination conditions, i.e. course work. "Cheating" means an attempt to benefit oneself, or another, by deceit or fraud. This shall include deliberately reproducing the work of another person or persons without acknowledgement. A significant amount of unacknowledged copying shall be deemed to constitute *prima facie* evidence of deliberation, and in such cases the burden of establishing otherwise shall rest with the candidate against whom such allegation is made.

3.12.2 The Department applies the full formal procedures of Regulation 11(B) to items of post module work.

3.12.3 Where cheating is suspected, Regulation 11(B) affects the candidate as follows:

The Academic Director of Graduate Studies, having agreed that the marker's suspicions are warranted, will either:

a) Report the matter to the Academic Registrar, thereby invoking the procedures for an investigating committee, in which case:

   i) The participant shall be informed that he/she may send a written statement to the Academic Registrar before the meeting of the investigating committee.

   ii) The participant has the right to appear in person at the committee with his/her personal tutor or another academic is he so wishes.

   iii) The committee either dismisses the case or applies a penalty, informing the Department and the candidate.

   iv) The maximum penalty is normally a mark of zero for the unit of study to which the piece of assessed work belongs, but in appropriate cases a more
severe penalty may be imposed.

v) There are rights of appeal, as specified in the Regulation.

Or

b) Determine the matter at Departmental level, in which case:

i) The participant will be warned and given an opportunity to make representation on his/her own behalf.

ii) The Chairman may exact a penalty not exceeding zero in the item of assessed work to which the offence relates.

iii) The student may accept the finding or seek the jurisdiction of an investigating committee as in (a) above.

3.13 Referencing Material

Participant should note the following points of Departmental practice:

a) Acknowledgement of quoted work should take the form of a properly stated reference (author, work, date, page number), and the quoted part should be clearly denoted by suitable paragraphing, quotation marks, etc. (see below)

b) Common working used by more than one participant engaged on writing up the same task in a report (PMW/Project) submitted for credit should be acknowledged by a short note explaining the joint authorship. Within reason, this practice, if acknowledged, will not be discouraged or penalised, but joint authorship should be agreed in advance with the Academic Supervisor, each participant should normally submit their own unique report and "Discussion of Results" or "Conclusion" sections should always be under sole authorship. However, an academic setting a specific task can explicitly call for and accept a joint group report on that particular task.

TUTORS MAY REQUIRE WORK TO BE SUBMITTED IN ELECTRONIC FORM IN ORDER TO CHECK THE ORIGINALITY OF THE WORK AGAINST PUBLISHED MATERIAL, INCLUDING WWW SOURCES AND WORK SUBMITTED PREVIOUSLY BY WMG STUDENTS; REFUSAL TO SUBMIT WORK IN THIS FORM MAY BE INTERPRETED AS GUILT. STRICT PENALTIES WILL BE APPLIED WHERE SUCH COPYING IS IDENTIFIED.

Please note that you should also properly reference work that you have previously submitted yourself.
3.13.1 Referencing Example

This is an example that is designed to show the difference between plagiarising work, copying sections, quoting it and correctly using it as a reference.

It uses a section from page 92 of the book “Managing IT at Board Level”, by Kit Grindley

This would be regarded as plagiarism (where the text is directly copied from the source with no reference to that source - this can result in a zero mark for the piece of work)

The smaller companies typically exhibit less decentralization of IT than large ones; and the role of the IT director tends to be more all-embracing therefore, covering not only IT strategy and planning, but also the provision of most of the data processing service, with responsibility for efficiency, levels of service and so on.

This would be regarded as a type of copying (where the text is directly copied from the source, but there is a reference to that source - this can result in the copied section being ignored during the assessment)

The smaller companies typically exhibit less decentralization of IT than large ones; and the role of the IT director tends to be more all-embracing therefore, covering not only IT strategy and planning, but also the provision of most of the data processing service, with responsibility for efficiency, levels of service and so on [1].

This is quoting (where the text is directly copied from the source, but it is referenced and clearly indicated with quotation marks and indentation that it is a direct quote - this is only used when it is impossible, or inappropriate for some reason, to re-word the section)

According to Grindley [1]:

“The smaller companies typically exhibit less decentralization of IT than large ones; and the role of the IT director tends to be more all-embracing therefore, covering not only IT strategy and planning, but also the provision of most of the data processing service, with responsibility for efficiency, levels of service and so on.”

You would generally choose to quote directly if you believe that any changes to the phrasing would change the meaning of effect intended by the original author. However, bear in mind that a careful paraphrase that does justice to the source (and is acknowledged – see below) is much more readable that a lengthy quotation.

This is correctly using a reference

According to Grindley [1], the IT directors in smaller companies tend to have a broader role than those in larger companies. This is attributed to the fact that there is less decentralisation in these smaller companies, which means that the IT directors have to cover a wider range of
activities, ranging from strategy and planning to the provision of the data processing services.

1 Grindley, K; Managing IT at Board Level (Pitman, 1992), p 92

Note: Any diagrams used in submitted work that have originated from books/notes/journal articles etc must also be properly referenced.

Further guidance on Plagiarism (and how to avoid being accused of Plagiarism) can be found on the University of Warwick’s web-site at:
http://www2.warwick.ac.uk/services/elearning/store/assessment/plagiarism/

In addition the University had a self-teach package on plagiarism and referencing at http://www.warwick.ac.uk/services/elearning/plato which course participants are STRONGLY recommended to take advantage of.

A further exercise designed to identify copying in your own and others’ work, can be found at the following site:


### 3.14 Methods of Citing and Documenting Referenced Work

There are two main approaches to citing referenced work:

#### 3.14.1 British Standard System

This is the technique used in the above example and is sometimes known as that University of Chicago or the Vancouver system. In it the author’s name and a reference number is given in the text either:

- in round brackets, e.g. In a recent study, Smith (5) argued that . . .
- in square brackets, e.g. In a recent study, Smith [5] argued that . . .
- as a superscript numeral

WMG prefers the first two of these options.

Full details of the reference are then listed at the end of the chapter or document (or occasionally in footnotes on the relevant page – but this is not encouraged within WMG). The numbers in the list are allocated consecutively in the order that the reference citations appear in the text.
3.14.2 *Harvard System*

The second method, which is more modern and generally easier to manage (except when you are using older works which have no clearly defined publication date, or are of uncertain or disputed authorship), identifies the author(s) and date of publication of the source referenced in parentheses in the text; this is called the Harvard or MLA (Modern Language Association) technique. Either of the forms shown below can be used:

- In a recent study Madnick (1986) showed that . . .
- In a recent study (Madnick 1986) it was shown that . . .

If there are three or less authors, all names are used, separated with a comma or “&”, where there are more than 4 authors, the terms “et al” is used. Initial letters would normally only be used, in parenthesis, in order to avoid confusion when two or more authors have the same surname and published in the same year. Where an author has more than one publication in the same year, a lowercase letter is used after the date.

Anonymous works may be shown by Anon. in place of the author's name. If you wish to refer to individual pages of a particular book or article the page number(s) should be given after the date, separated from it by a comma or colon:

- (Ward and Griffiths 1996, 236) or (Ward and Griffiths 1996:236)

Either system can be used, but not both in the same document, and be consistent with your use of punctuation and font! In all cases the reference should contain the following information:

- Author’s first name (or initial), middle initial (where known) and last name. The surname should be listed first, followed by the first name and initial. If the author is in fact an editor, the term “ed.” should follow the name.
- Title of the book (usually underlined or in italics)
- Place of publication
- Date of publication; for the British Standard this appears after the place of publication, in the Harvard system the date of publication appears in parentheses immediately after the author’s name
- Volume number, in large Roman numerals
- Page number (sometimes, rather than having a large number of citations to a single reference source, a supervisor will prefer the page number to be included in the citation itself, rather than in the reference listing.)

3.14.3 *Internet sources*

When citing Internet references, the following information (based on APA standards) is
required:

- Author/editor (if known)
- Revision or copyright date, if available, in parentheses
- Title of page, followed by a comma then the term [Online], in square brackets
- Page publisher
- <URL> (Web address)
- Date of citation (i.e. when you accessed that page), in square brackets

Note the following:

- If no author is credited then use the smallest identifiable unit within the publishing organisation, or use the title of the page
- If no date is given then write "No date"
- Include the word "online" in square brackets for ALL Internet sources. This may be the company or organisation responsible for hosting the web site if no other information is available

Further information on source citation (electronic and paper) can be found from the following:


### 3.15 The Board of Examiners

The award of degrees is made by the University Senates upon recommendations made by Boards of Examiners which consists of members of staff involved with the delivery of the programme and an External Examiner - a senior academic from another institution. The Boards of Examiners meet in May/June and late November/early December. Candidates are forwarded to the Board for consideration when:

- They have completed their coursework and submitted their project dissertation
Their project dissertation had passed through the moderation process at the local centre

OR

They have passed the end of their period of registration without completing the above

The Boards will consider the course work and project performance of all the candidates, together with any other information which is relevant to their decision making process. They will then make recommendations to the University Senates regarding the following awards (subject to appropriate module combinations as outlined above in section 3.4):

MSc with Distinction
- as for MSc, but where coursework average AND project mark >70%

MSc
- 9 modules (appropriate for the degree) are passed at 40% or better AND
- the average of the coursework is at least 50% AND
- the project mark is at least 50%

Postgraduate Diploma
- where 12 modules are completed and passed at 40%
- OR
- where 6 modules are completed and passed at 40% or better AND
- the project mark is at least 40%

Postgraduate Certificate
- where 6 modules (appropriate for the degree) are completed and passed at 40% or better

Postgraduate Award
- where 3 modules (appropriate for the degree) are completed and passed at 40% or better

Fail
- where none of the above apply

Candidates may re-apply to complete the MSc with credit carried forward after the award of Postgraduate Diploma/Certificate/Award ONLY if they were registered for that award before their original period of registration expired and they had not already been granted a final extension to their earlier MSc registration. Acceptance of the re-application is NOT guaranteed, but will depend on circumstances/performance during the original period of registration and the timing of the return. Candidates who are awarded the Postgraduate Diploma/Certificate or Award whilst still registered for the MSc are NOT eligible to return and complete the MSc with credit.
3.15.1 Resubmission of work

When the Exam Board is considering a candidate for the first time, the Board may recommend that the candidate be required to do additional work, or be allowed to resubmit part of the course work or project dissertation for consideration by the next Board. In the case of re-submission of the project dissertation, this will only be allowed for re-drafting purposes; where insufficient empirical research has been carried out during the original submission period, it is unlikely that a re-submission will be allowed. Only one re-submission is allowed and marks awarded for resubmitted work are normally “capped” at a mark of 50%.

3.15.2 Transcripts of Marks

For Joint Award participants, their official transcripts of marks are issued by the Hong Kong Polytechnic University. For Warwick Award participants, their official transcripts of marks are issued by Warwick Manufacturing Group. Transcripts are NOT issued automatically, only upon written request. However, no official transcript of marks can be issued until after the Examination Board has met and their recommendations approved by both University Senate(s).

3.15.3 Complaints and Appeals

Complaints

If you have any complaints about any aspect of the teaching and learning process and/or the provision made by the University to support that process, you should raise that complaint using the University’s Academic Complaints Procedure which can be found at http://www2.warwick.ac.uk/services/academicoffice/contact/complain/. In the first instance, you should raise the complaint in writing with the person responsible for the action which has given rise to the complaint, and if this cannot be resolved satisfactorily the complaint may be raised with the Course Coordinator of the teaching institution or Warwick department.

If the complaint remains unresolved, you may be able to take it further through the independent student complaints scheme run by the Office of the Independent Adjudicator for Higher Education (OIA). Further information is available from your Students’ Union, or from the OIA website at http://www.oiahe.org.uk.

Appeals

If the Board of Examiners decides that you should:

a) Withdraw from the course, or
b) Not be awarded a qualification, or
c) Be awarded a lower qualification than the one for which you are registered
You have the right to appeal (in writing and within 10 days of receiving the letter of notification of the Board’s decision) to the Chair of the Graduate Appeals Committee. Appeals will be considered if:

- You are in possession of evidence which was not available to the Board of Examiners when their decision was reached and can provide good reasons for not having made the examiners aware of the circumstances affecting his/her performance; or
- There appears to have been procedural irregularities in the conduct of the examination process; or
- There appears to be evidence of prejudice or of bias on the part of one or more of the examiners; or
- There is evidence of inadequacy of supervisory or other arrangements during the period of study, noting that an appeal on these grounds may only be considered where the candidate can provide good reasons for not having made known his/her complaint at an earlier stage.

The University Regulation 16 Governing Appeals at Postgraduate and Post-Experience Level is available in the University of Warwick Calendar at http://www2.warwick.ac.uk/services/gov/calendar/section2/regulations/. As a taught course participant you should refer to section 16.4.

### 3.16 Conferment of Degrees

The Chancellor of the University of Warwick officially confers degrees at ceremonies at Warwick in January and July and the President of The Hong Kong Polytechnic University in Hong Kong in November/December. Joint Award degree certificates are issued by The Hong Kong Polytechnic University and Warwick Award degree certificates are issued by the University of Warwick. Both MSc degree certificates are issued only once the degree has been conferred. MSc Graduates will be invited by the Universities to attend a degree ceremony; they may elect to attend the ceremony, receive their degree in absentia, or (for the Warwick Ceremonies) defer their attendance to the next degree ceremony (once only). Candidates being considered by the May or November Exam Boards may, in fact, receive this invitation from Warwick before the Exam Board has considered their performance; in this case the invitation is conditional on them successfully passing through the Exam Board. In general successful candidates from the May Boards are eligible to graduate at Warwick in July, and those considered by the November Boards are eligible to graduate in January.

Postgraduate Diplomas, Certificates and Awards are NOT awarded at the University of Warwick Degree Ceremonies, although these graduates may attend the Hong Kong Polytechnic University Ceremony. The parchments are sent directly to graduates after the
University of Warwick Senate has approved their award.

3.17 University Regulations

The University of Warwick Regulations are printed in the University Calendar, copies of which are available on the University’s site on the World Wide Web at http://www2.warwick.ac.uk/services/gov/calendar/.

3.18 Chartered Engineer

Many students, particularly those with an engineering first qualification, express an interest in joining an Engineering Institution, with the intention of ultimately becoming a Chartered Engineer. The title of Chartered Engineer (CEng) is reserved for those registered with the UK Engineering Council (UKEC) who have meet the educational, training and experience criteria of the Council. One of the most relevant Engineering Institutions for students on the WMG MSc programmes is the IET (Institution of Engineering and Technology).

The latest standard for recognition of professional engineers and engineering technicians (UK-SPEC) is published by ECUK on behalf of the engineering profession. If you wish to apply for Chartered Engineer (CEng), ECUK (through the Engineering Institutions) requires that you demonstrate competence and commitment in a number of areas defined as "Roles and Responsibilities".

The competence and commitment states derived from these "Roles and Responsibilities" form the basis of the Professional Review. Educational qualifications, Development Action Plans and evidence records will need to be presented to demonstrate that these statements have been addressed and competence achieved to a standard appropriate to the candidate's job at CEng level.

The Roles and Responsibilities which provide the framework for assessing competence and commitment are:

<table>
<thead>
<tr>
<th>Competence</th>
<th>A Knowledge and Understanding</th>
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<tbody>
<tr>
<td></td>
<td>B Application to Practice</td>
</tr>
<tr>
<td></td>
<td>C Leadership/Management/Supervision</td>
</tr>
<tr>
<td></td>
<td>D Interpersonal Skill</td>
</tr>
<tr>
<td>Commitment</td>
<td>E Professional Conduct</td>
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</tbody>
</table>

According to UK-SPEC the standard educational requirements for CEng are:

- Either an accredited BEng Honours degree plus further learning to Masters Level
- Or an accredited BEng Honours degree, started before 1st September 1999.
- Or a non-accredited degree which can be individually assessed as equivalent to a BEng Honours plus further learning to Masters level
- Or an accredited MEng degree

Whilst the simplest route to membership is via an accredited educational programme, the IET will accept other appropriate qualifications of the required standard. Applicants will be assessed by a committee on an individual basis against the benchmark qualification taking into consideration both their education and importantly, career development.

Some individuals may be allowed to progress through to the Professional Review phase where any areas of perceived weakness can be explored by specific questioning at the interview.

Others may be asked to demonstrate that they have achieved the requisite level of knowledge and understanding of appropriate engineering principles by submitting a technical report for assessment, completing relevant university modules, taking Engineering Council exams or following an assessed work-based learning programme.