

## **Guidelines for Entry to University of Warwick Engineering Doctorate Programme**

(In partnership with Hong Kong Polytechnic University)

### **1. Introduction to the PgA/EngD Admissions Procedure**

The University of Warwick Engineering Doctorate (EngD) is a part-time doctorate programme of typically 5 years duration. The programme aims to develop engineers and managers such that they are able to perform research into complex and often multi-disciplinary problems (within the context of the engineering business), resulting in innovative solutions which add substantial value, not just within the academic field in which the research takes place, but also in the “real world” of business. The EngD is equivalent to the traditional PhD, but with emphasis on producing innovation in the application of knowledge, with demonstrable business benefits.

Admission to the EngD in Hong Kong is a two-stage process, starting with registration on an enhanced Postgraduate Award (PgA). The PgA takes one year to complete, after which upgrade to the EngD takes place if certain criteria are met. For those who succeed in upgrading to the EngD, the one-year PgA is included in the 5 year total registration period. This document aims to provide applicants and their sponsor companies with details on the requirements of the PgA/EngD and how to make an application.

### **2. PgA as a Transfer Route to EngD**

As indicated above, admission to the EngD programme normally requires that you first register and complete an enhanced PgA, subject to satisfactory entry qualifications and experience. The enhanced PgA has two main requirements. You are expected to complete three MSc level modules (achieving marks of 65% or more). Full credit transfer with respect to these modules will occur on successfully upgrading to the EngD. In addition, you are required to complete an *upgrade report* outlining the area of research through an initial critical literature review, and setting out the research objectives and outline plans for carrying out the work. If upgrade to EngD is successful, the upgrade report may provide the basis for the first submission to the EngD Portfolio (described in the *EngD Handbook* available from the IGDS Course Administration Office, Hong Kong Polytechnic University). Since the work carried out during the PgA is transferred in the event of a successful upgrade to EngD, the one-year PgA registration is included in the 5 year total duration of the EngD.

## 2.1 Applying for the Enhanced PgA

Applying for the PgA/EngD requires that you complete a University of Warwick application form (provided by the IGDS Course Administration Office of the Hong Kong PolyU) and submit an outline description of the proposed area of research. This should include:

- A brief statement of the problem that would be researched
- Some justification as to why the problem does not have an “off-the-shelf” solution
- Some indication of how the candidate might approach the problem, and
- A statement from the candidate on how much time they would have available to spend (in a typical week) on the research

This outline research proposal should provide sufficient background information to allow Warwick and HK PolyU staff to assess its suitability as a doctoral research project, and to enable Mentors (supervisors) with appropriate background knowledge and expertise to be identified. Applicants are also required to submit two references, **at least one of which MUST be an academic reference**, and the transcript of marks for a Masters and Bachelor degree in an appropriate subject area. Applicants will usually receive formal confirmation of acceptance on to the enhanced PgA via email, subject to satisfactory entry qualifications and submission of appropriate documentation (as detailed above) - all documentation for your application should be submitted to the IGDS Course Administration Office at the HK PolyU.

Formal interviewing of candidates for the PgA/EngD is not normally required, but applicants can make arrangements to discuss their research ideas with a member of Warwick's Research Degrees Executive or PolyU staff, through the HK PolyU. In addition, applicants will normally have at least one interview with a member of the Research Degrees Executive during their PgA registration. The Executive typically visit Hong Kong on a twice yearly basis (usually in March and September) but interviews can also be conducted online, where appropriate.

Successful applicants for the enhanced PgA will be given instructions on how to enroll via the University of Warwick's on-line enrolment facility. On successfully enrolling, the applicant will have access to Warwick's facilities, including on-line access to the University library.

## 2.2 PgA Modules

The PgA requires the successful completion of three MSc level modules within the one-year registration period. WMG MSc modules are available to PgA participants through the IGDS MSc programme, run in conjunction with the HK PolyU. A number of PgAs are available in conjunction with Warwick's programme in Hong Kong, these are Engineering Business Management (EBM), Manufacturing Systems Engineering and Management (MSEM) and Supply Chain and Logistics Management (SCLM). Therefore, applicants may choose a PgA which will best support their needs with respect to their intended area of research. However, each PgA has different requirements in terms of the specific module subjects which are acceptable. Applicants therefore need to assess these requirements and select modules which will meet the PgA most appropriate to them.

The module requirements for each of the PgAs available are summarized below. Table 1 lists the modules which are generally available in Hong Kong (check with Harvey Ip in the IGDS Administration Office, HK PolyU for updates and a current schedule).

**Please note** that graduates of Hong Kong IGDS MSc are advised not to select modules for their PgA that they have already completed as part of their Master's degrees.

### ***PgA Engineering Business Management (EBM)***

For the EBM PgA, candidates must select **at least one** module from the "Business" or "Direction Motivation and Care of People", **AND at least one** module from **EITHER** the "Manufacturing" **OR** the "Operations/Other".

### ***PgA Manufacturing Systems Engineering and Management (MSEM)***

This PgA requires **at least** two modules which are designated as "Manufacturing". These would include:

- Product Design and Development Management
- Industrial Engineering for Business Improvement
- Logistics and Operations Management
- Operations Strategy for Industry
- Supply Chain Management
- Project Planning, Management and Control
- Quality Management and Techniques
- Procurement and Inventory Management

***PgA Supply Chain and Logistics Management (SCLM)***

This PgA requires that the Supply Chain Management (SCM) and Logistics and Operations Management (LOM) must be completed.

If you are a graduate of Hong Kong IGDS MSc, and have already completed the SCM and/or the LOM module as part of that degree, you may request an exemption (please contact Harvey Ip for guidance). If an exemption is granted, you would be required to select replacement modules that cover closely related subjects, e.g., Procurement and Inventory Management (PIM), Transport Techniques and Management (TTM) or Storage and Warehousing Techniques (SWT).

All modules are run on campus at HK PolyU – details are available from the IGDS Course Administration Office (Room EF611, Core F) in the Dept. of Industrial and Systems Engineering. Successful completion of a module for the PgA requires full attendance and the satisfactory completion of the post-module assignment. On successfully upgrading to EngD at the end of PgA registration, credit for these modules will count as part fulfillment of the EngD's taught component.

Table 1 – Classification of IGDS Modules

Designation	Module Title
Business (B)	<u>Direction Motivation and Care of People</u> <ul style="list-style-type: none"> <li>• Leading Change</li> <li>• Organisations, People and Performance</li> </ul>
	<u>Business</u> <ul style="list-style-type: none"> <li>• Business Strategy and Strategic Management</li> <li>• Digital Marketing, Systems and Techniques</li> <li>• Financial Analysis and Control Systems</li> <li>• Financial Strategy</li> <li>• International Joint Ventures</li> <li>• Legal Aspects of Global Business</li> <li>• Strategic Marketing</li> </ul>
Manufacturing (M)	<ul style="list-style-type: none"> <li>• Industrial Engineering for Business Improvement</li> <li>• Logistics and Operations Management</li> <li>• Operations Strategy for Industry</li> <li>• Procurement and Inventory Management</li> <li>• Product Design and Development Management</li> <li>• Project Planning, Management and Control</li> <li>• Quality Management and Techniques</li> <li>• Supply Chain Management</li> </ul>
Operations (O)	<ul style="list-style-type: none"> <li>• Enterprise Information Systems</li> <li>• Innovation</li> <li>• Service Design and Delivery</li> <li>• Storage and Warehousing Techniques</li> <li>• Technology Management</li> <li>• Transport Techniques and Management</li> </ul>

\* Please contact IGDS Administration Office (Room EF611, Core F) in the Dept. of Industrial and Systems Engineering at HK PolyU for module schedule information

### **3. The Support Available**

During registration on the enhanced PgA, support will be provided by both Warwick and the HK PolyU in developing the upgrade report. Either before or on registering for a PgA, you will meet with a member of the Research Degrees Executive, who will explain the rationale, structure and requirements of the EngD, along with guidance on how to achieve upgrade from PgA to EngD.

Each successful applicant will be allocated three Mentors (supervisors) for the duration of their PgA/EngD registration, whose role it will be to provide guidance in developing and undertaking the research. You will be supported by both a Hong Kong (PolyU) Academic Mentor and two UK (WMG) Academic Mentors. You are encouraged to make contact with your Mentors as soon as possible and to maintain contact with them throughout your registration (either face to face, via email, teleconference or an online facility such as MS Teams). In addition, it will be important to identify a suitable Industrial Mentor, whose role it is to assess the relevance and value of the research to business/industry. The Industrial Mentor will ideally be someone in the candidate's sponsor company or employer, e.g., a line manager or senior manager with the authority and appropriate background to support the candidate in their research.

Support is also available through a Research Methodology (REME) module which is designed to provide doctorate students with a basic grounding in the necessary research skills, and to enhance awareness of the requirements of doctorate level research. The module will typically run in the UK three times per year (depending on demand), usually in November, December and May, and is usually five days in duration. It is also a good idea to arrange to meet with your UK Mentors (if possible) whilst in the UK for the module. Alternative arrangements will be made for those unable to attend the module in the UK. Depending on circumstances, this module may also be available online – the module tutor, Dr Tina Barnes, or the WMG Research Degrees Office (RDO) will advise on the format available – contacts are provided in Section 6. The fees for the module are included in the fees for the PgA-EngD, but you will be expected to cover the cost of your travel and accommodation (if required). Since the module is designed to develop knowledge of research methods and understanding of the requirements of doctoral level research, attendance should take place as soon as possible after starting the PgA. Joining instructions for this five-day module will be issued via the WMG Research Degrees Office (RDO). Further information about the module is available from the module tutor, Dr. Tina Barnes ([t.a.barnes@warwick.ac.uk](mailto:t.a.barnes@warwick.ac.uk)).

#### **4. Upgrade to the EngD**

Upgrade to the EngD at the end of the PgA registration period is dependent on meeting two important criteria. You must have successfully completed three MSc modules for one of the PgAs offered in Hong Kong, achieving marks of **65% or above** and submitted an upgrade report of an acceptable academic standard.

The purpose of developing the upgrade report is to prepare, in advance, the groundwork for a feasible and robust EngD research project. The upgrade report will include a detailed problem definition and justification, an initial critical literature review demonstrating your knowledge of the chosen research field, and an outline research design (including a timing plan for the work). It is also recommended that a first draft Portfolio plan be prepared at this point, detailing how the research work would translate into Portfolio submissions (and the timescales for their submission). A detailed explanation of the form and structure of the EngD Portfolio can be found in the EngD Handbook (available from the IGDS Course Office, HK PolyU).

The upgrade report should be submitted directly to the WMG Research Degrees Office (RDO) via this link:

<https://warwick.ac.uk/fac/sci/wmg/intranet/research/engd/engdhk/mphilphdupgrade/upgradesubmission/>.

*Please also send a copy of your upgrade report to Harvey Ip in the IGDS Office of the Hong Kong PolyU, confirming to him that you have formally submitted the report to WMG.*

The WMG and PolyU Academic Mentors will be asked to submit individual written reports to the RDO, providing an indication of your level of progress throughout the year, and an assessment of the quality and feasibility of the research proposal (as set out in the upgrade report). Two independent Reviewers will be appointed by the RDO to review your upgrade report. You will also be required to participate in an upgrade interview (essentially an oral exam) with your Reviewers (usually via a teleconference facility or remote meeting platform such as MS Teams). The Reviewers will then submit a joint report and a recommendation to the RDO. The decision arising from this review process will be communicated to you via email.

#### **5. Outcome Decisions**

If you meet the standards required, the Research Degrees Office (RDO) will inform the Doctoral College at University of Warwick of the decision to upgrade you (with module credit transfer). Final approval needs to be given by the Chair of the Board of Graduate Studies at Warwick - formal confirmation will be sent to you by email by WMG. EngD registration will generally start approximately 12 months after the start of the PgA and will be for a further 4 years. Unsuccessful candidates will be awarded a PgA, provided that the requirements for this award have been met. Written feedback to unsuccessful candidates with respect to why upgrade to EngD was not approved, will be made available on request.

## **6. Contact Details**

Enquiries should, in the first instance, be directed to:

### **Harvey Ip:**

*Email:* sc.ip@polyu.edu.hk

*Tel:* (852) 27664228

*Fax:* (852) 27644471

*Address:* IGDS/IMDS Administration Unit  
Room EF611, Core F  
The Hong Kong Polytechnic University  
Hung Hom, Kowloon HONG KONG

### **Dr Tina Barnes:**

A member of the WMG Research Degrees Executive, Dr Barnes is responsible for the day to day management of the PgA-EngD programme in Hong Kong.

*Email:* [t.a.barnes@warwick.ac.uk](mailto:t.a.barnes@warwick.ac.uk)

*Tel:* +44 2476 523785

*Address:* Research Degrees Office,  
International Manufacturing Centre (IMC),  
University of Warwick,  
Coventry  
CV 4 7AL  
ENGLAND

Enquiries to the EngD Executive at University of Warwick should be directed to the Research Degrees Office (RDO):

### **WMG Research Degrees Office:**

*Email:* wmgresearchdegrees@warwick.ac.uk

*Tel:* +44 (0)24 7652 8672

*Address:* Research Degrees Office,  
International Manufacturing Centre (IMC),  
University of Warwick,  
Coventry  
CV 4 7AL  
ENGLAND

### **Important Notice**

In response to the on-going COVID-19 situation, IGDS modules in Hong Kong will be delivered in "mixed" mode in the 2020/2021 academic year.

- PolyU Tutors, External Speakers, and WMG, University of Warwick will deliver on-line using MS Teams
- Syndicate exercises will be facilitated over MS Teams by WMG faculty
- Delivery will normally be in the afternoon and evening in Hong Kong (to allow for the UK time difference)

Face to face teaching would be resumed in Hong Kong as soon as UK, Hong Kong and Universities travel regulations allow, international air flights are commercially viable and faculty feel safe to travel, we can make no promises in the face of current levels of uncertainty. However, in the event of a worsening situation in Hong Kong, all delivery would be on-line on MS Teams into your own accommodation.