

WMG, led by Professor Lord Kumar Bhattacharyya, is an internationally-recognised group famed for the strength of its connections to industry, healthcare and government. WMG's high-quality research and taught programmes involve active user collaboration to ensure that we achieve excellence with impact. The programmes are delivered in the UK and overseas centres including China, India, Singapore, N.Cyprus and Thailand.

Our leading academic expertise is supported by advanced R&D labs in four dedicated buildings, with construction of a fifth about to commence. This enables research related to digital technology; materials and technology; and operations & business management. These overriding research themes cross a number of sectors including automotive; aerospace & defence; digital; energy & utilities; food & drink; government; healthcare and pharmaceutical.

We lead major collaborative research programmes including the £9m EPSRC-sponsored Warwick Innovative Manufacturing Research Centre, the £17m Low Carbon Vehicle Initiative working with major automotive companies, the £4m Institute of Digital Healthcare with the West Midlands Strategic Health Authority and a £10m EPSRC-supported Industrial Doctoral Centre in High Value, Low Environmental Impact Manufacture. We deliver education programmes for Astra Zeneca, BAE Systems, Jaguar Land Rover and Network Rail. WMG was awarded the Queen's Anniversary Prize for Further and Higher Education 2009, in recognition of the impact of our postgraduate programmes undertaken in collaboration with industry.

In the last national Research Assessment Exercise in 2008 over 70% of our research activity was recognised as world-leading or internationally-excellent. Our research has major impact – in the automotive sector it has led to over 270 new products and processes in the last five years.

WMG works with thousands of companies around the globe, from multinationals to highly innovative local companies, and has strategic partnerships with a number of key companies (e.g Arup, Corus, IBM, Jaguar and Land Rover, Tata).

WMG

(formerly Warwick Manufacturing Group)

www.warwick.ac.uk/go/wmg

(see also Warwick Business School on page 171)

RESEARCH DEGREES

MASTER'S BY RESEARCH (MScR)
MASTER OF PHILOSOPHY (MPhil)
DOCTOR OF PHILOSOPHY (PhD)
DOCTOR OF ENGINEERING (EngD and EngD (Int))

TAUGHT MASTER'S DEGREES

MSc IN ENTERPRISE INTEGRATION
MANAGEMENT (EIM)
MSc IN SUPPLY CHAIN & LOGISTICS
MANAGEMENT (SCLM)
MSc IN PROGRAMME AND PROJECT
MANAGEMENT (PPM)
MSc IN MANUFACTURING SYSTEMS
ENGINEERING (MSE)
MSc IN INTERNATIONAL TECHNOLOGY
MANAGEMENT (INT)
MSc IN ENGINEERING BUSINESS
MANAGEMENT (EBM)
MSc IN MANAGEMENT FOR BUSINESS
EXCELLENCE (MBE)
MSc IN e-BUSINESS MANAGEMENT (E-BM)
MSc IN PROCESS BUSINESS MANAGEMENT (PBM)
MSc IN CYBERSECURITY AND MANAGEMENT (CSM)
MSc IN INNOVATION AND ENTREPRENEURSHIP (IAE)

CONTACT DETAILS

Research Degrees

Dr Kevin Neailey (Research Degrees Director)
WMG
IMC

☎ +44 (0)24 7652 4762
✉ k.neailey@warwick.ac.uk

Barbara Boneham (Research Course Secretary)
WMG
IMC

☎ +44 (0)24 7652 4357
✉ engd@warwick.ac.uk

Taught Master's
Full-time: Cathy Fawcett
☎ +44 (0)24 7657 5889

✉ wmgmasters@warwick.ac.uk

Part-time : Claire Belkadi
☎ +44(0)24 7657 9038
✉ wmgptmasters@warwick.ac.uk

Overseas: Refer to overseas centres, details available from WMG website

RESEARCH GROUPS

Digital Technologies

Design of products and services; enhanced online security; customer behaviour; capturing data and developing new processes. Research combines academic and industry expertise from science, engineering, technology, business and medical standpoints. By considering technology, enterprise and human factors we deliver high impact. Areas include security in cyberspace, information security, how people engage with environments, virtual reality and serious games, applied neuro-imaging, simulation testing for customer decision making, product and service design, e-business and understanding how consumers think and make decisions. The Digital Technologies Group also includes the Institute for Digital Healthcare. Specific research areas include the use of virtual reality in the education of healthcare professionals and digital technologies in healthcare systems and monitoring.

Materials and Technologies

We are at the forefront of using new materials and manufacturing technologies, challenging conventional thinking to enable cost savings and environmental benefits in processes and product design. Driven by a team with industrial and academic experience, we work in aerospace, automotive, healthcare, consumer electronics, biomedical and leisure. Areas of particular interest in materials are eco-friendly racing using sustainable materials, interior air quality and emissions in vehicles, low cost titanium, metal forming, plastics and mouldings, ceramics additive layer manufacturing and bone tissue engineering.

Areas of particular interest in technologies include low carbon technologies, manufacturing processes, electro-spinning, automation of production processes, joining processes, robotics, new simulation methods, search and rescue, improving product quality, how people engage with their environments, optimisation of vehicle sounds and advanced measuring technologies.

Operations and Business Management

Improved business performance and competitiveness through the introduction of new ideas and practices. Areas of particular interest include lean enterprises, new product introduction, life cycle management, supply chain management and logistics, simulation and modelling for analysis of processes, organisational excellence models, systems for managing quality and reliability, information systems, operations strategy and control. We have worked in a wide range of industries, in manufacturing and increasingly in the service sector including automotive, aerospace, construction, pharmaceuticals, healthcare, and finance.

RESEARCH DEGREES

All research students will work with supervisors who hold interests in a wide range of inter-disciplinary subjects across the three overall research themes covered within WMC:

- Digital Technologies (including digital manufacturing and healthcare, e-security, visualisation and communications)
- Materials and Technology (including plastics processing, light materials, sustainability, laser processing, experiential engineering and haptics)
- Operations and Management (including logistics, international joint ventures and simulation)

MASTER'S BY RESEARCH (MScR)

**Standard Duration: 1 year full-time
2 years part-time**

MASTER OF PHILOSOPHY (MPhil)/ DOCTOR OF PHILOSOPHY (PhD)

**Standard Duration: 3 years full-time,
5 years part-time**

The PhD programme trains students in rigorous research methods that will allow them to become part of an international community of scholars and industry leaders.

DOCTOR OF ENGINEERING (EngD and EngD(Int))

Standard Duration: 3-4 years full-time

The Engineering Doctorate (EngD) combines research and industrial experience. It is equivalent to a PhD but with a wider, more practical focus and an emphasis on innovation. The flexibility of the EngD means you can start at whatever stage you are in your career, as the programme is responsive to your needs and that of the industry. The majority of the time is spent in the company. Some participants remain with their current employer, others will be associated with a company that is supporting the project.

We currently have two programmes: the EngD (International) has a more specific taught element based on the MSc in Innovation and Entrepreneurship. It includes a specified time working overseas and has ESPRC financial support for appropriate individuals as part of the £10m Industrial Doctoral Centre in High Value, Low Environmental Impact Manufacture.

APPLICATION FACT FILE (RESEARCH DEGREES)

Entry Requirements

Minimum 2:1 Hons or equivalent. For EngD, while some industrial experience is preferred, participants may range from relatively recent graduates to experienced managers. A Master's degree is preferred for entry onto an EngD.

English Language Requirements

IELTS 6.5, TOEFL (iBT) 92 or equivalent

Application

Applications should be made online at www.warwick.ac.uk/go/pgapply

We strongly encourage all applicants to discuss their proposal with a potential supervisor or the Research Degrees Director, Dr Kevin Neailey (K.Neailey@warwick.ac.uk), before applying.

Tuition Fees

(2011/2012 fees. Please note that fees for 2012/13 will be published online in spring 2012.)

Home/EU: Full-time £3,900, Part-time £2,340

Overseas: (Band 2, lab-based): Full-time £15,460, Part-time £9,276

EngD: In addition to the above fees: £5,000 – £7,000pa for taught courses depending on current experience.

EngD (Int): Fees vary – for information, please contact the Department directly.

Funding

A number of scholarships and CASE Awards for Home/EU applicants, see departmental website for further information. Details of the Chancellor's Scholarships and other funding opportunities are available on the Graduate School website: www.warwick.ac.uk/go/graduateschool

TAUGHT MASTER'S DEGREES

MSc IN ENTERPRISE INTEGRATION MANAGEMENT (EIM)

**Standard Duration: 1 year full-time
(9–10 modules + dissertation)**

Places available: 30 (UK)

This degree develops you as a future leader in technology-led businesses or in technical consulting. You will learn how leading companies use IT to introduce new products to the market utilising state-of-the-art software systems and manage the implementation and operation of IT within technology-led businesses in order to maximise benefits and competitiveness.

On completion of the programme, you may develop your career in an industrial organisation or a PLM consulting company. From initial work in supporting new systems implementations you are likely to progress to consultancy work, technical sales or account management.

MSc IN SUPPLY CHAIN & LOGISTICS MANAGEMENT (SCLM)

Standard Duration: 1 year full-time (9–10 modules + dissertation)

**3 years part-time (12 x 5-day residential modules
(usually 6 per year) + dissertation/project (6 months))**

3 years part-time overseas (at least 9 modules + dissertation)

Places available: 200 in the UK (plus varying numbers with overseas partners)

This degree supports the development of people entering or already employed in logistics, purchasing and supply chain either in service based or manufacturing-based organisations. The course develops leaders and change agents who can manage effective supply chains and lead technology integration. It provides basic understanding of markets, product and process development and financial management to reliable and cost effective supply. This degree can lead to membership of CIPS.

The course is offered full-time in the UK and part-time in the UK and overseas through collaborations in Thailand; the Postgraduate Award (only) is available in Hong Kong. Graduates can expect to be employed in many different service and manufacturing organisations, including providers of third party logistics, aerospace and electrical/electronic products and technology based firms.



Paulina Rovira Sanchez
e-Business Management graduate
WMC

“I worked in software development for a digital security company in Mexico and, with a degree in Electrical Systems Engineering, I felt that I’d built a sound base of technical skills. I wanted to know more about business though. Specifically, I wanted an understanding of e-business based organisations and how emerging technologies could drive their development.

After attending a careers fair in Mexico City, I decided that WMC’s e-Business Management course fitted the bill. In particular, I was impressed by how much the programme focused on ‘real world’ situations. It was really interesting to look at today’s manufacturing companies and the challenges they face, then work with others to develop effective solutions.

I also took the SAP Certification course as part of the SAP University Alliances programme in which Warwick participates. Because I achieved the highest marks of any student in the UK and Ireland, I was invited to present at the SAPPHIRE international conference. This was about SAP and universities around the world working more closely together to help students launch their careers. I felt that I was able to make a real impact on an event that could steer the future of enterprise systems and education.”

MSc IN PROGRAMME AND PROJECT MANAGEMENT (PPM)

Standard Duration: 12 months full-time (9–10 modules + dissertation)

3 years part-time (12 x 5-day residential modules (usually 6 modules per year) + dissertation/project (6 months))

3 years overseas part-time (at least 9 modules + dissertation)

Places available: over 200 in the UK (plus varying numbers with overseas partners)

This degree equips you with the skills to operate effectively in the current business environment of multi-project/programmes to ensure successful and profitable project management. The course provides the methodologies, tools, principles and philosophies and covers human resource management as well as financial aspects, risk and change management in projects. Teaching methods are innovative and interactive and students gain extensive practical experience through applied syndicate activities and current case studies delivered by professionals in the field. The course is offered full-time, part-time and overseas through collaborations in China (specifically SAR Hong Kong).

Graduates can expect to be employed as project managers or as part of a project management team in information technology, the service industries, or any business area needing project management skills. Part-time individuals will either progress within their current company or seek progression to high level management position in other companies.

Applicants to this course come from a wide variety of academic backgrounds including arts and humanities as well as science and engineering.

MSc IN MANUFACTURING SYSTEMS ENGINEERING (MSE)

Standard Duration: 12 months full-time (9–10 modules + dissertation)

3 years part-time (12 x 5-day residential modules (usually 6 modules per year) + dissertation/project (6 months time))

3 years part-time overseas to complete at least 9 modules + dissertation

Places available: around 100 places in the UK (plus varying numbers with overseas partners)

This course combines value creation with strategic development in a manufacturing environment. You will develop an understanding of the concepts of manufacturing engineering systems and the skills to analyse, design and implement these systems in practice. This is combined with an understanding of strategic and operational management of organisations. MSE is offered full-time, part-time and overseas through collaborations in China (specifically SAR Hong Kong), and is an IET Accredited Programme.

On completion of the course, you will have an up-to-date knowledge of manufacturing techniques and processes and can expect to be employed as a leader in general engineering and manufacturing engineering management. Part-time students will either be able to progress within their current company or seek progression to high level position in other companies.

MSc IN INTERNATIONAL TECHNOLOGY MANAGEMENT (INT)

Standard Duration: 12 months full-time (9–10 modules + dissertation)

3 years part-time (12 x 5-day residential modules (usually 6 modules per year) + dissertation/project (6 months))

3 years overseas part-time (at least 9 modules + dissertation)

Places available: around 100 places in the UK (plus varying numbers with overseas partners)

This degree aims to equip you with the skills and knowledge necessary to lead a high-tech, high growth, globally operating company. It will provide you with the knowledge to manage the development, acquisition and operation of technology in a global, competitive environment and contribute to the management of international operations.

On completion graduates will either progress within their current company or seek progression to high level management positions in other companies. This IET Accredited course is offered full-time, part-time and overseas through collaborations in China (specifically SAR Hong Kong) and Thailand.

MSc IN ENGINEERING BUSINESS MANAGEMENT (EBM)

Standard Duration: 12 months full-time (9–10 modules + dissertation)

3 years part-time (in UK) (12 x 5-day residential modules (usually 6 modules per year) + dissertation/project (6 months))

3 years part-time (overseas) (at least 9 modules + dissertation)

Places available: 200+ (UK) (plus varying numbers with overseas partners)

This degree develops the capability to manage and lead in technology-based organisations. EBM focuses on key value-adding activities such as: marketing; product and process development; operations, logistics and supply chain management; and exploitation of competitive technology. The skills and techniques introduced in this course give new impetus to businesses and help individuals to get the best from themselves, their team and their company. This course is an IET Accredited Programme and can also lead to membership of the Chartered Institute of Purchasing and Supply, subject to suitable project and choice of modules.

The course is offered full-time in UK and part-time in UK and overseas through collaborations in China (specifically SAR Hong Kong), India, Singapore, Thailand and N.Cyprus; programmes in Russia are expected to start in 2012.

Graduates can expect to be employed as managers or as part of a management team in various industries globally – IT, the service industries, or any business area needing engineering management skills. Part-time individuals will either progress within their current company or seek progression to high level management position in other companies.

MSc IN MANAGEMENT FOR BUSINESS EXCELLENCE (MBE)

Standard Duration: 12 months full-time (9–10 modules + dissertation)

3 years part-time (UK-only) (12 x 5-day residential modules (usually 6 modules per year) + a dissertation/project (6 months))

Places available: 48 (UK)

This degree delivers a detailed understanding of the philosophies, strategies, processes and techniques that enable and deliver business excellence in technology based organisations. You will develop key management and technology skills, including leadership, customer focused product and process development, asset and resource management and Six Sigma to enable you to drive excellence across the business. On completion, you could expect to find employment as managers and leaders in business development, new product development, manufacturing, quality assurance, human resources management or customer services.

MSc IN E-BUSINESS MANAGEMENT (e-BM)

Standard Duration: 12 months full-time (9–10 modules + dissertation)

Places available: 60 (UK)

This degree equips you with the skills to enable you to operate effectively in the e-business environment and to manage or lead either the transformation of existing business processes or creation of new e-business activity. The programme is suitable for graduates from IT, engineering or science backgrounds and also management students with a keen interest in technology and how it can be used effectively to promote competitiveness. On completion, graduates may go on to work in information technology and software-related companies or enterprises developing on-line e-business initiatives, particularly those in the engineering and/or manufacturing sector as well as consultancy roles.

MSc IN PROCESS BUSINESS MANAGEMENT (PBM)

Standard Duration: 12 months full-time (9–10 modules + dissertation)

3 years part-time (12 x 5-day residential modules (usually 6 modules per year) + dissertation/project (6 months))

Places available: up to 100 (UK)

This degree will provide you with a range of tools and techniques required to effectively manage enterprises related to the chemical and process industries, including oil & gas, water, electricity, mining and pharmaceuticals. You will gain a broad understanding of industrial processes and process engineering as well as studying business strategy and strategic management. This IET Accredited Programme also examines the implications for the local and international environment in which process business operate. Graduates can go on to employment in chemical and other process industries as well as a wide range of engineering organisations.

MSc CYBERSECURITY AND MANAGEMENT (CSM)

Standard Duration: 1 year full-time (9–10 modules + dissertation)

Places available: 30 (UK)

This course is aimed at those wishing to become cybersecurity professionals, or to take a management role in an organisation critically dependent upon data and information communication technology. You will cover key areas in information risk management and network defence, gain an advanced understanding of implementing security management programmes, and learn the techniques and technologies used in enterprise security architectures.

The course also covers the broad skills required for effective management and leadership excellence.

Graduates can expect to go on to work within security and technology teams, consultancies, government information-security departments and cybersecurity-related research organisations.

MSc INNOVATION AND ENTREPRENEURSHIP (IAE)

Standard Duration: 1 year full-time (9–10 modules + dissertation)

Places available: 30 (UK)

This course focuses on the exploitation of innovation, applied to technology and business knowledge, to increase the chances of success for new product or services based businesses. Through this practically orientated course, you will cover the whole process from generating new business ideas, developing and refining them, designing the infrastructure and launching the business. You will use the latest methods and technologies to support these processes.

The MSc project is devoted to developing your business idea in a rigorous manner so that at the end of the course you will be in a position to launch your own business. The project will run in accordance to a "New Product Development Plan" developed with a range of industrial partners and tested with real new product business ideas.

Applicants can come from all academic disciplines but must be able to demonstrate entrepreneurial flair.

APPLICATION FACT FILE (TAUGHT DEGREES)

Entry Requirements

Enterprise Integration Management (EIM) e-Business Management (e-BM)

At least a 2:ii degree in science, engineering, business or an IT related subject.

Programme and Project Management (PPM) Innovation and Entrepreneurship (IAE)

At least a 2:ii degree – most academic backgrounds will be considered. For part-time, candidates offering an HNC/HND plus professional qualifications and/or proof of significance work experience, can also be considered.

Manufacturing Systems Engineering (MSE)

At least a 2:ii degree in engineering or a technology-related subject. For Part-time, candidates offering an HNC/HND plus professional qualifications and/or proof of significance work experience, can also be considered.

Supply Chain & Logistics Management (SCLM) International Technology Management (INT) Engineering Business Management (EBM) Management for Business Excellence (MBE) Process Business Management (PBM)

At least a 2:ii degree or equivalent, in a business, management or technology-related subject. For part-time, candidates offering an HNC/HND plus professional qualifications and/or proof of significance work experience, can also be considered.

Cybersecurity and Management (CSM)

At least a 2:ii degree or equivalent, in IT or Computer Science, or subject with significant content of either.

English Language Requirements

IELTS 6.5 (with no score below 6.0), TOEFL (iBT) 92 or equivalent. Completion of a 3-year undergraduate degree in the UK or other English-speaking country will also be accepted.

Application

Applications should be made online at www.warwick.ac.uk/go/pgapply

Application Deadline

Full-time: End of September

Part-time and Overseas: On-going enrolment throughout the year

Tuition Fees

(2011/12 fees. Please note: fees for 2012/2013 will be published online in spring 2012.)

Home-EU: Full-time £7,500 (2011 rate),
Part-time £20,885*

Overseas: Full-time £16,000, Part-time £20,885*

*includes accommodation and food for each residential module.

Funding

Approximately £250,000 of bursaries, scholarships and Early Acceptance Schemes are available for full-time international students, see departmental website for further information. Details of other funding opportunities are available on the Graduate School website: www.warwick.ac.uk/go/graduateschool