

PART-TIME
**PROFESSIONAL AND
EXECUTIVE PROGRAMMES**

Welcome

"Academic excellence with industrial relevance is at the heart of what we do. It's what makes us unique. I'm passionate about ensuring that industry has leaders with the skills to shape and sustain its future. Our modular approach to professional education will help you to broaden your knowledge and capabilities. You will be able to add value to your company, so that you can make a real impact in your sector."

Professor Lord Kumar Bhattacharyya,
Kt, CBE, FREng, FRS
Chairman and Founder, WMG



Contents

Why Warwick?	04
Why choose WMG?	05

Our programmes

Undergraduate	08
Aspiring Leaders	10
Postgraduate	11
SMEs	18
Custom	19

Postgraduate module list	22
Fees	23



Why Warwick?

With a reputation for excellence in research and teaching, for innovation, and for links with business and industry, Warwick is one of the leading universities in the UK.

Our reputation

Consistently placing in the Top 10 universities in the UK, and recently breaking into the Top 50 in the world, Warwick was named The Times and Sunday Times University of the Year 2014-2015.

The prestigious Royal Anniversary Trust have awarded us two Queen's Anniversary Prizes for Higher and Further Education in recent years, including in recognition of WMG's long-term professional education partnerships.

As one of the UK's leading research universities, the quality and impact of our research is also reflected in our rankings in the Government's Research Excellence Framework (REF) 2014. Placing 7th overall, 87% of our research is 'world-leading' or 'internationally excellent'.

Our vision

We strive to lead rather than follow and are renowned for our entrepreneurialism and global outlook. We are as respected for boundary breaking research as we are for teaching and business collaborations.

Our vision is to be a truly world class university – one with a dynamic, enterprising approach to solving global challenges, that enables students to create their place in the world, and that defines the university of tomorrow.

Collaboration with business

We collaborate with industry through all of our research departments, as well as through education, allowing businesses to benefit from our extensive range of expertise.

We show the world what a modern university can do: delivering a service, solving problems, and providing sustainability for the local community and global society.

Our Global Research Priorities programme also provides collaborative opportunities in Energy, Food, Global Governance, Innovative Manufacturing, International Development, Materials, Science and Technology for Health, and Sustainable Cities.

A vibrant campus university

Warwick has an award-winning campus situated in the heart of England, just five miles from the city of Coventry. Our campus is surrounded by beautiful green space, but with easy access to transport links. We are one hour from London by train, and Birmingham Airport is just 20 minutes away.

With four star conference facilities, and shops, banks, sports facilities, bars and restaurants at your disposal, we have an attractive and lively environment.

Our outstanding academic resources include access to over 1million printed works and over 48,000 e-books and e-journals to help in your study.

Our alumni

The 185,000 strong global Warwick Alumni Network allows you to connect with graduates from almost every country and profession, and tap into a host of benefits provided by the University.



Why choose WMG?

WMG delivers a unique combination of world class education with real business and industry application.

Our broad portfolio of programmes offers award-winning part-time education from apprentice and undergraduate, to postgraduate and executive level.

We have forged strong links with leading engineering, manufacturing, technology, and service-led companies, as well as key industrial bodies. One of the largest academic departments at Warwick, our ability to deliver high quality, industrially relevant education is evident in the industry accreditation awarded to many of our programmes.

Our approach to education is to add real value and benefits to a company through its people. We aim to unlock individual potential by creating confident, highly skilled leaders, who can in turn unlock the potential in their company.

By leveraging the results of our cutting-edge research and development, we can provide you with the very latest thinking, tools, and processes for your chosen field. Our

tutors are able to bring their subjects to life by blending their academic knowledge with their experience in a variety of industry sectors, supporting you in applying what you learn directly back into your company.

You will study alongside peers from a variety of industries, sharing best practice across sectors and developing your professional networks. Our flexible, modular format means you can direct your learning in a way that works for both you and your company.

We also deliver custom programmes, tailored to the needs of your company, in the UK or overseas. We work with you to create anything from short courses to longer accredited study programmes.

If you want high quality, innovative programmes for professional development, we are confident we can offer a solution to suit you.

Sectors we work with



automotive



aerospace
and defence



business



construction



energy
and
utilities



food
and
drink



healthcare



IT



security



rail

How can we help you?

We have designed our programmes to be flexible to allow you to study and progress in a way that suits both you and your company.

In addition to providing you with the latest academic knowledge, we will help you to develop the necessary practical and soft skills to be effective in your current or future roles. We have a number of pathways, depending on your experience and requirements.

Do you want to develop your engineering skills?

Our part-time Applied Engineering Programme (AEP) leads to a Bachelor of Engineering degree and offers:

- ▶ A non-traditional entry route to university for those not possessing A levels, or those on Higher/Degree Apprenticeships
- ▶ A broad grounding in engineering for the first two years
- ▶ Opportunities for specialisation in the third and fourth years
- ▶ Work-based assignments and projects that enable you to apply your learning to your own work and develop your practice
- ▶ Stepping off points at Certificate and Diploma levels if needed, with the option to re-join AEP later
- ▶ Support outside of the study blocks via a Virtual Learning Environment

See page 8 for more information on our undergraduate programme.

Do you want to take your first steps on the management ladder?

For those without an undergraduate degree, our new Aspiring Leaders programme offers:

- ▶ A way to improve your wider business knowledge and your personal and business effectiveness
- ▶ A route into Master's education upon completion, further supporting your management career path

See page 10 for more information.

Are you looking for ways to boost your knowledge and skillset at a management and executive level?

Our part-time postgraduate education programmes include:

- ▶ Engineering Business Management
- ▶ International Trade, Strategy and Operations
- ▶ Supply Chain and Logistics Management
- ▶ Programme and Project Management
- ▶ Service Management and Design
- ▶ Manufacturing Systems Engineering
- ▶ Cyber Security and Management
- ▶ Sustainable Automotive Engineering
- ▶ Healthcare Operational Management

You can choose from over 30 modules covering leadership, business, operations, engineering, manufacturing, service, and technology-centred themes.

Via the stepping stones of a Postgraduate Award and/or a Postgraduate Certificate, you can build towards an MSc from the University of Warwick.

See page 11 for details of our postgraduate programmes.

Could your organisation benefit from a professional education programme tailored to your staff development needs?

We deliver shorter courses of just a few days, up to larger accredited programmes delivered over months/years. This might include individual modules, workshops, technical courses, or management programmes.

As a company, you are fully involved in the development process at all stages. These programmes can be delivered on your site, whether in the UK or overseas.

See page 19 for examples of custom programmes.

Who else do we work with?

To ensure that we are creating programmes that will help to develop the vital skills that industry needs, we design and review our programmes in collaboration with engineering, manufacturing, service, and technology-led companies.

More than 500 companies have so far benefited from our programmes, and we are proud that our alumni continue to recommend WMG for professional education.

Companies currently sending delegates to us include:

- ▶ Aero Engine Controls
- ▶ Airbus
- ▶ AgustaWestland
- ▶ AstraZeneca
- ▶ AWE
- ▶ BAE Systems
- ▶ BFG International
- ▶ BNP Paribas Corporate and Investment Bank
- ▶ Boeing
- ▶ Bombardier
- ▶ Carlsberg Breweries
- ▶ Caterpillar BCP UK
- ▶ Cemex UK
- ▶ Controls and Data Services
- ▶ Deloitte Touche Tohmatsu Limited
- ▶ Dresser-Rand
- ▶ Ericsson
- ▶ EDF Energy
- ▶ Exel Logistics
- ▶ GE Aviation
- ▶ GE Energy
- ▶ GM Financial Services
- ▶ GSK
- ▶ Heathcote Fabrics
- ▶ Highways Agency
- ▶ HSBC
- ▶ Inalfa Roof Systems
- ▶ Jaguar Land Rover
- ▶ Kohler
- ▶ L-3 TRL
- ▶ Lloyds Banking Group
- ▶ Man Made River Project
- ▶ Marposs Ltd
- ▶ Morgan Advanced Materials
- ▶ MOD
- ▶ National Grid
- ▶ Network Rail
- ▶ Northamptonshire Police
- ▶ Precision Micro
- ▶ Premier Farnell
- ▶ Prima Solutions
- ▶ PZ Cussons
- ▶ Qioptiq
- ▶ Rolls-Royce
- ▶ Santander
- ▶ Schlumberger
- ▶ Sellafield
- ▶ Shell Petroleum Development Company
- ▶ Siemens plc
- ▶ Stadco
- ▶ Syngenta
- ▶ TAFE India
- ▶ Tata Motors
- ▶ Tata Steel
- ▶ Telent
- ▶ Thomas Dudley
- ▶ Travis Perkins
- ▶ TVS Motors
- ▶ TRW
- ▶ UTAS Engine Control Services
- ▶ UTC Aerospace Systems
- ▶ Vion
- ▶ Wessex Water

Lee Webb

Senior Manufacturing Engineer, Cummins Power Generation

Joining the programme at WMG will be one of the best decisions you could make if you are serious about your professional development and keen to develop your business knowledge and thinking regarding Engineering and Manufacturing. It will definitely support your career development and allow you to add value to your business.

Chris Lewis

Head of Processing and Formulation, AstraZeneca

WMG offers a structured programme for people whom we see as having emergent talent who could go on to senior positions.

Undergraduate Applied Engineering Programme

Do you already work in an engineering or technology-led company but want to gain a formal engineering qualification? Our Applied Engineering Programme (AEP) allows you to gain a BEng degree while working full-time.

What will the programme provide?

Successful completion of the four-year programme will give you a Bachelor of Engineering (BEng) degree from the University of Warwick. For outstanding candidates there is the opportunity to extend the programme to study for a Master's degree in your chosen field.

During the first two years, you will take modules in a range of key areas to ensure you have a good grounding in the basics of engineering. You will then choose a specialism for your third and fourth years, allowing you to focus on your particular interests, and the needs of your company.

Jaguar Land Rover, Network Rail, and Rolls-Royce are among the employers who have reviewed the curriculum to ensure it meets the specific skills needs of the engineering industry. Assignments and projects are also company based, so that you can make an immediate and relevant impact in your workplace as you progress at each stage.

With over 200 participants currently studying with us from a range of companies, there will also be numerous opportunities to learn about how others are doing things and share best practice across different sectors.

As an undergraduate student at the University of Warwick you will also have access to WMG's tutors, facilities and online learning environment, plus resources and facilities across the University campus.

"WMG is the perfect partner to help develop our engineering community and I am delighted that so many of our employees will be able to study for a degree at one of the UK's leading academic institutions."

Dr Ralf Speth
Chief Executive,
Jaguar Land Rover

Is this for you?

AEP offers a non-traditional path into university education. You may be any age and come from any area of your company. We have students who have recently completed standard apprenticeship schemes, others who are partway through their Higher Apprenticeships or wish to study a Degree Apprenticeship, and more experienced staff looking to further develop their engineering skills and add value to their company.

To enrol on the programme you will need to have proof of company support and have achieved, or be expecting to achieve, a good standard in A level Maths and preferably also Physics. However, if you don't have these particular qualifications we can assess your ability using our own entry tests. Practice tests and a virtual learning environment can help you prepare if you have been out of education for some time.

Delivery and assessment

For the first two years you'll study the core range of engineering and technical subjects, taking six mixed-subject blocks per year. Examinations and work-based assignments are integrated throughout the year, allowing for continuous assessment rather than final exams.

Across years three and four you will take a total of ten single subject blocks (allowing for specialisation in your chosen area), and complete two individual projects. The emphasis here is on work-based post-block assignments and projects rather than formal written exams.

Each block will run over five full days, Monday to Friday, at the University of Warwick. In addition to the normal lectures, practical laboratories, seminars and tutorials, you will have access to an online 'Virtual Learning Environment' for further support between blocks.

Modules

Year 1

- ▶ Applied Engineering Design
- ▶ Electrical and Electronic Principles
- ▶ Engineering Business and Operations Management
- ▶ Engineering Mathematics
- ▶ Materials and Processes
- ▶ Mechanics and Energy Methods

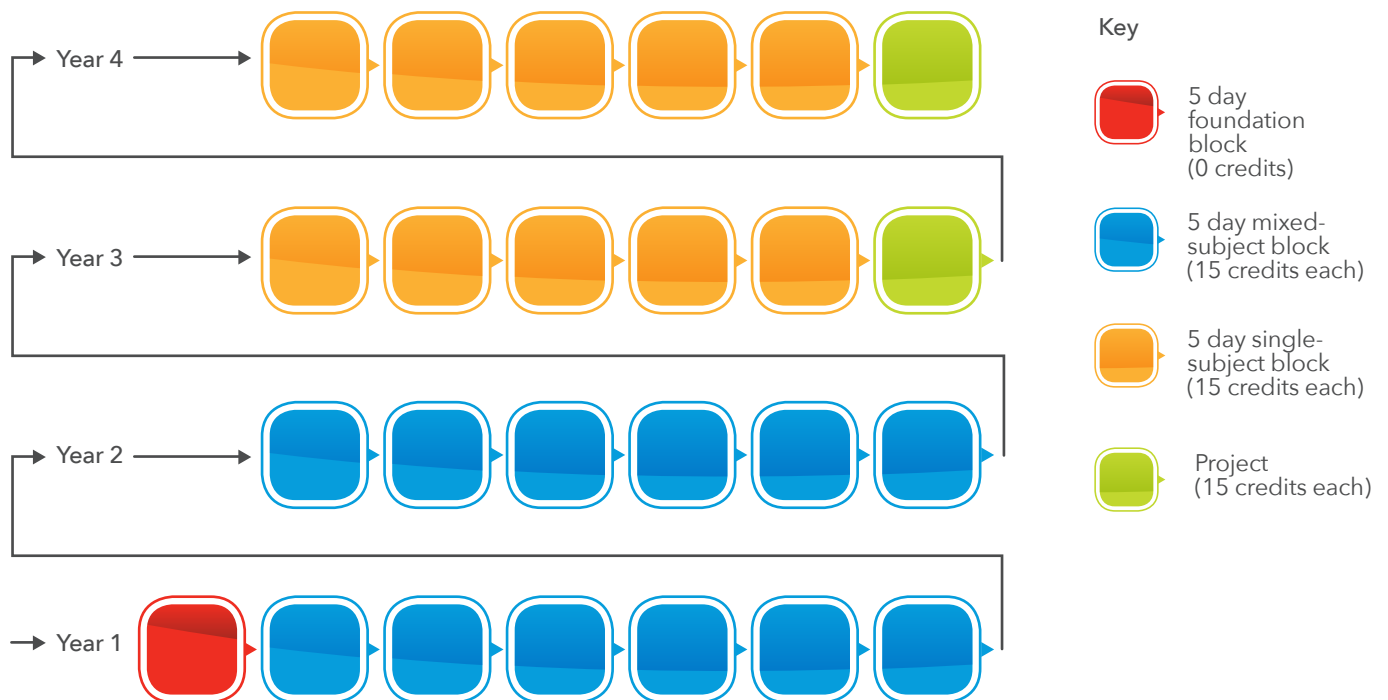
Year 2

- ▶ Analytical Modelling and Simulation
- ▶ Design for Manufacturing
- ▶ Dynamic Mechanics and Thermofluids
- ▶ Engineering Systems
- ▶ Instrumentation and Control
- ▶ Quality Methods

Options for Years 3 and 4

- ▶ Advanced Quality Techniques
- ▶ Aerodynamics
- ▶ Asset Management
- ▶ CAD/CAM
- ▶ CAE (CFD, FEA) and Physical Correlation
- ▶ Electrical and Electronic Systems
- ▶ Industrial Processes
- ▶ Logistics
- ▶ Materials for Advanced Application
- ▶ Measurement Systems and Metrology
- ▶ Mechatronics and Systems Control
- ▶ Productionising Designs
- ▶ Project Management and Leadership
- ▶ Rail specific block(s)
- ▶ Stress Analysis
- ▶ Supply Chain Management
- ▶ Sustainable Energy Systems

Programme structure



Aspiring Leaders

New for 2016

Are you taking your first steps on the management ladder?
Do you want to develop your skills and wider business understanding?

What will the programme provide?

The focus of the programme is to encourage you to reflect on and develop your own practice as a leader, in whatever role or sector you are in.

You will learn how to improve your effectiveness, and how to apply the tools and methodologies you study within the context of your own organisation for greater personal and business performance.

You will study alongside peers from a range of companies and backgrounds, helping to build your professional networks and to share ideas and best practice from a variety of organisations and sectors.

Is this for you?

This programme is designed as a starting point to management development for those with no formal higher education qualifications, but who show leadership potential. You might, for example, be in the early stages of your career, or want to work your way up from the shop floor.

You may be from any area of your company and be of any age, but will need to demonstrate company support.

Delivery and assessment

Our Aspiring Leaders modules run over three days. There are six modules, to be completed over a 12 month period. You will be assessed through two work-based mini-projects, enabling you to apply what you've learnt back into your workplace.

Successful completion will give you a Post-experience Certificate from the University of Warwick, and entry to WMG Master's degree programmes.

Modules*

Self Awareness

Explore your personal drivers and emotional intelligence in order to interact effectively with others and further develop your interpersonal skills.

Working in Groups

Building on the previous module, you will explore different types of interaction at work, and the key considerations needed to improve the effectiveness of people working together.

Business Awareness

Understand your role within the wider business context. Learn more about strategic business models and the decision-making context for businesses as a basis for internal strategies.

Financial Awareness

Understand the financial aspects of the business so that you can contribute to departmental financial planning and control.

Leadership in Organisations

Recognise the circles of influence and the role models that exist in all organisations. Understand the importance of coaching and mentoring, and how to use appropriate performance management systems.

Improving Business Performance

Appreciate the importance of personal action to drive change and to facilitate improvement. Understand change models and the importance of reinforcement of critical thinking principles and evaluation.

*Subject to final approval from the Academic Board

Postgraduate programmes

Develop your knowledge and management skills across leadership, business, operations, engineering, manufacturing, service, and technology centred themes.

What do we provide?

We want you to have the flexibility and choice to direct your own professional development in a way that works for you.

We offer nine Master's (MSc) degree streams, detailed on the following pages, and each designed to be taken part-time over a three year period.

With over 30 individual modules available (see page 22), you can tailor your education to complement your existing knowledge and career plans, and best meet the requirements of your company.

Programme structure

To be awarded your Master's degree you will need to complete ten modules, two supporting events (Induction Day and Research Methodologies) and your company-based project/dissertation, which will reflect your chosen stream. This typically takes three years.

However, because we understand that you may not be able to commit to a long term period of study at this time, and that circumstances may change, you can build up to your MSc in stages (see programme structure overleaf).

Completing three modules in a twelve month period will give you a Postgraduate Award (PgA) in your chosen stream. If you complete six modules within eighteen months, you will be awarded a Postgraduate Certificate (PgC), again in your chosen stream. The credits gained and fees paid at each stage can be carried over to the next level as long as this is done within five years.

For core modules at PgA and PgC level please contact us (see back cover).

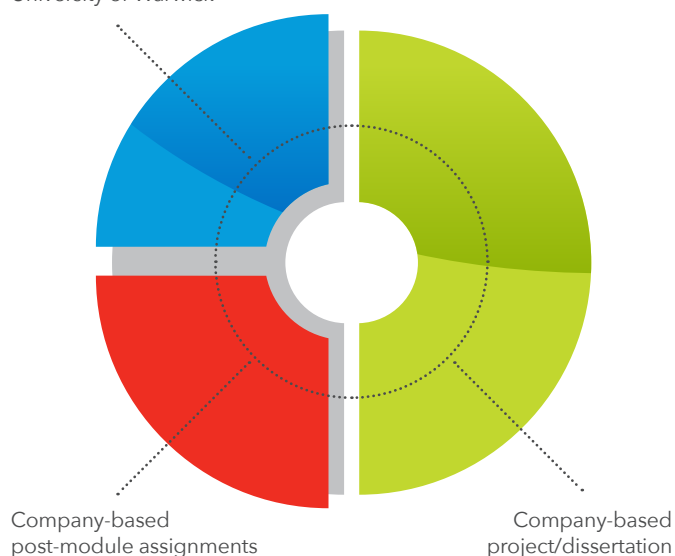
Delivery and assessment

Our postgraduate modules run over four and a half intensive days on the Warwick campus, starting on a Monday morning and finishing Friday lunchtime. You will attend lectures and seminars, and undertake group tasks based on real scenarios. To allow you to immerse yourself in the programme, modules are fully residential (with the exception of MSc Healthcare Operational Management). Accommodation and meals will be provided at one of the University's award-winning conference centres.

We believe that the best way to embed the ideas, tools, and processes you have studied is by applying them back to your work environment. This is why each module is followed by a post-module work-based assignment, rather than written examinations.

Your work-based dissertation will make up 50% of your final degree and should be a project relevant to your chosen stream and your business. You will be supervised by a WMG tutor and a manager from your company to help guide your research.

Modules at
University of Warwick



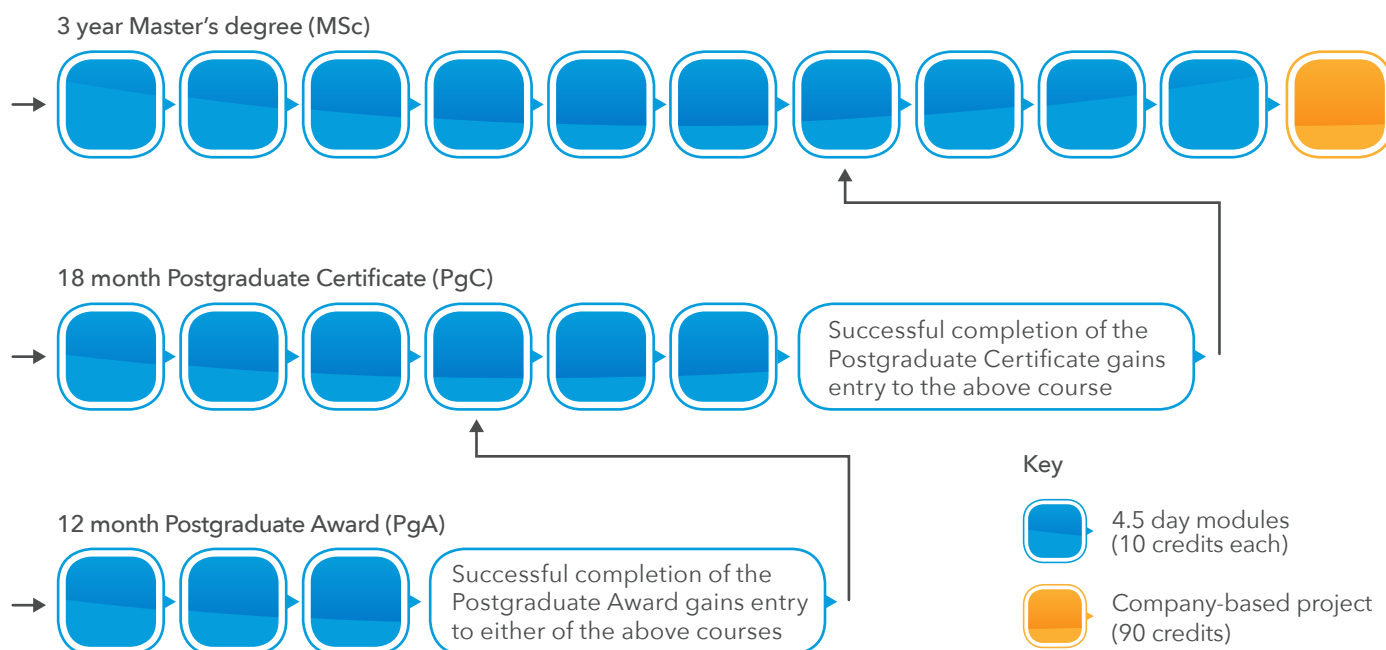
Is this for you?

Because you will need to apply your studies directly to your work environment, you should be currently employed and able to prove company support. We also recommend that you have at least two to three years of appropriate professional experience and that you possess at least a second class honours degree.

If you have an HND/HNC and professional qualifications with significant experience, you may be considered to start on an intermediate qualification such as the Postgraduate Award or Postgraduate Certificate, with the opportunity for progression to the MSc.

If you are not sure if postgraduate study is for you, please do call us on 024 765 23976 to discuss your options.

Postgraduate programmes structure



MSc Engineering Business Management (EBM)

Do you want to manage or lead technology-based organisations? This course is suitable for graduates from a wide range of engineering, business, IT and science backgrounds.

What will the course provide?

EBM is our most flexible MSc stream, and allows you to develop your knowledge and skills in the key 'value adding' activities for business: product and process development, operations, logistics and supply chain management, marketing, and exploitation of competitive technology.

You will gain a broad understanding of the processes and technologies used by engineering businesses, and the analytical tools to improve both internal and external operations. You will also develop skills for the research, analysis, and evaluation of complex business problems, and gain a methodical approach to problem solving and decision-making.

This course is accredited by the Institution of Engineering and Technology.



Core module

Financial Analysis and Control Systems

Understand the basic accounting principles, terminology and techniques required to enable you to interpret financial reports and management accounting practices. Contribute to departmental financial planning and control.

Elective modules

In addition to the core module, you should select at least five operations and technology modules, at least one business module, and any three others to make a total of ten. See full list on page 22.

MSc International Trade, Strategy, and Operations (ITSO)

Do you need to trade successfully in international markets? Accredited by the Institute of Export, this MSc thoroughly covers the management and operational requirements you will need, with an emphasis on theory into practice.

What will the course provide?

This MSc is relevant to managers of all organisations trading internationally, as well as Trade Advisors in sectors including engineering, retail, manufacturing, wholesale, financial services and the service sector. You will gain a comprehensive overview of how international companies operate and how you can contribute to successful international operations.

The breadth of the programme provides a clear overview of all the elements of international trade, but you also have the freedom through your dissertation and elective modules to specialise on a particular aspect of interest to you, including: transportation and logistics, customs and the legal aspects of international business, business development, relationship management and negotiation, and implementation of strategy.

The skills you develop will enable your involvement in the whole business process, from initial engagement with a new market right through to the delivery of a product or service.

This course is accredited by the Institute of Export and International Trade



Core modules

- ▶ Financial Analysis and Control Systems
- ▶ Financial Strategy
- ▶ International Joint Ventures
- ▶ Legal Aspects of Global Business
- ▶ Transportation Techniques and Management
- ▶ Strategic Marketing

Elective modules

You may select any four of the following:

- ▶ Leading Performance
- ▶ Applied Statistical Methods
- ▶ LEAN Principles and Application
- ▶ Logistics and Operations Management
- ▶ Project Planning, Management and Control
- ▶ Procurement and Inventory Management
- ▶ Reputation and Relationship Management
- ▶ Service Design and Delivery
- ▶ Supply Chain Management
- ▶ Leading Change
- ▶ Operations Strategy for Industry

MSc Service Management and Design (SMD)

Effectively manage the combination of organisations, people, technologies, and information needed to deliver value to your customers and stay ahead of the competition.

What will the course provide?

As many companies are being driven to change their business models to include services to retain commercial advantage, there is a need for strong leadership that blends multidisciplinary expertise.

You will learn the systems and techniques used to manage service industries and to create value in the business across suppliers and within industry processes

This course will show you how to take a 'systems' view of services in relation to your product; considering design, development, delivery, maintenance and eventual replacement, and the management of services to deliver long term value to the customer.

Core modules

- ▶ Service Design and Delivery
- ▶ Service Support Technologies
- ▶ Financial Analysis and Control Systems

Elective modules

You will need to select a further seven modules from the list on page 22 to make a total of ten.

MSc Programme and Project Management (PPM)

Do you want to move into project management, or simply improve your current skills? PPM is suitable for people from a wide range of academic and professional backgrounds.

What will the course provide?

You will learn the methodologies, tools and principles for successful and profitable project management, and be able to apply them in order to optimise business performance. As a graduate of PPM, you will be able to effectively develop and manage both small and large scale projects in a multi-project or programme business environment.

Participants on this programme tend to have a wide range of employment backgrounds, but all are currently involved in, or wish to move into, project/programme management in their chosen field.

Core modules

- ▶ Project Planning, Management and Control
- ▶ Leading Change
- ▶ Managing the Multi-Project/Programme Environment
- ▶ People in Organisations
- ▶ Financial Analysis and Control Systems
- ▶ International Joint Ventures

Elective modules

You may select any four other modules. See full list on page 22.

MSc Supply Chain and Logistics Management (SCLM)

Become a change agent and leader for effective supply chains in technology based, manufacturing, and service organisations.

What will this course provide?

You will gain a thorough understanding of the supply network: constructing the relationships that bring it into being; commissioning the technologies that enable it to operate; managing the input, the material and the information flow; and distributing the product.

As a successful graduate of SCLM you will be able to work effectively in a variety of markets, and manage product and process development, but also financial management to ensure reliable, cost-effective and high quality supply.

This course is designed for those working in logistics, purchasing, planning, and supply chain in manufacturing based enterprises, as well as supporting service organisations.

Core modules

- ▶ Supply Chain Management
- ▶ Logistics and Operations Management
- ▶ Financial Analysis and Control Systems
- ▶ Procurement and Inventory Management
- ▶ Legal Aspects of Global Business
- ▶ People in Organisations
- ▶ Operations Strategy for Industry

Elective modules

You will need to select a further three modules to make a total of ten. See full list on page 22.

This course is accredited by the Institution of Engineering and Technology, Chartered Institute of Purchasing and Supply, and the Chartered Institute of Logistics and Transport



Accredited Degree

MSc Cyber Security and Management (CSM)

Do you want to take a leading role in an organisation critically dependent upon data and information technology? CSM focuses on the strategic deployment of cyber security within a business.

What will this course provide?

We want to develop strategic thinkers who understand the cyber threat to an organisation and its resources, and are able to build and manage secure systems that support the strategic growth of a business.

Securing your patch of cyberspace is challenging, requiring both technical insight into the security of your digital systems and devices, but also the management of people who interact with them. We will prepare you to manage cyber security within an enterprise, from influencing the risk appetite of the board to managing firewall reconfiguration during a cyber attack.

Core modules

- ▶ Security Architectures and Network Defence
- ▶ Cryptosystems and Data Protection
- ▶ Information Risk Management and Governance
- ▶ Industrial Espionage and Counterfeiting
- ▶ Digital Forensics

Elective modules

You will need to select a further five modules. Please see the complete list on page 22.

This course is accredited by the Institution of Engineering and Technology, and provisionally certified by GCHQ



MSc Manufacturing Systems Engineering (MSE)

Do you come from an engineering background and want to learn more about the management side of manufacturing systems and operations?

What will this course provide?

You will develop an understanding of the concepts of manufacturing engineering systems, and the skills to analyse, design and implement them in practice. This will be combined with a broad understanding of the strategic and operational management of organisations.

This course is particularly suitable if you are looking to make the transition from engineer to engineering manager.

Core modules

You will need to choose five from the list below:

- ▶ Advanced Materials and Processes
- ▶ Applied Statistical Methods
- ▶ Operations Strategy for Industry
- ▶ Product Design and Development Management
- ▶ Project Planning, Management and Control
- ▶ Quality Management and Techniques
- ▶ Supply Chain Management

Elective modules

You will need to select a further five modules to make a total of ten. Please see the complete list on page 22.

This course is accredited by the Institution of Engineering and Technology



Kudakwashe Nyakupinda,
Multi-Skilled Maintenance Engineer, Vion Food Group UK

I chose the MSc in Manufacturing Systems Engineering after doing thorough research. This programme ticks all the boxes that I expected from postgraduate study in manufacturing.

MSc Sustainable Automotive Engineering (SAE)

New for 2016

Do you work for a vehicle manufacturer or specialist supplier? This course is ideally suited if you want to become a research manager and technology leader, driving the market introduction of new energy efficient vehicles.

What will the course provide?

You will gain a holistic understanding of the different technology options and methods for design, systems integration, and verification that will drive the market introduction of new energy efficient vehicles.

We will help you develop the skills to design and evaluate the next generation of automotive products with lower environmental impact than conventional vehicles. You will learn the latest innovations in research, technology management, and leadership that will help your career progression in the automotive industry.

As a successful graduate of SAE you will have the management skills, technical awareness, and vision to assess different technology options within the context of environmental legislation and consumer expectations for vehicle quality, reliability and performance.

Core modules

- ▶ Automotive Hybridisation and Electrification
- ▶ Energy Storage and High Voltage Automotive Systems
- ▶ Next-generation Automotive Propulsion Technology
- ▶ Lightweight Materials and Structures
- ▶ Systems Modelling and Simulation

Elective modules

You may choose five from the full list on page 22, but recommended modules are:

- ▶ Advanced Materials and Processes
- ▶ Design for the Environment
- ▶ Innovation
- ▶ Problem Solving with Statistics
- ▶ Quality, Reliability and Maintenance
- ▶ Supply Chain Management
- ▶ Technology Management
- ▶ Transport Techniques and Management

José Lopes,
MPhil, Ceng, FIET, FIMechE
Head of Technical Excellence, Jaguar Land Rover

Jaguar Land Rover's ability to drive the automotive market largely depends on its ability to successfully lead high technology R&D programmes. This can only be achieved through ready availability of a skilled workforce. I strongly believe that this MSc course is timely in addressing this skills shortage and the Energy and Electrical Systems group at WMG are best placed to design, develop and deliver such offerings.

MSc Healthcare Operational Management (HOMS)

New for 2016

Do you need to deliver efficient and effective services in the healthcare sector and related industries? This new Master's stream is offered by the Institute of Digital Healthcare at WMG, in collaboration with Warwick Medical School and the NHS.

What will the course provide?

This MSc has been designed for those interested in management or leadership roles within, or linked to, the health service sector – whether as a practitioner or as a supplier. For example, you may have a clinical background, or you might work in non-clinical management, biomedical or clinical engineering, healthcare technology, or pharmaceuticals.

As you seek to understand the changing demands on the health sector and the implications for your own organisation, you will be able to identify key tasks and best processes for your evolving service environment.

Healthcare organisations share many commonalities with production facilities, including the need for efficient process flow, change management, and quality standards. You will explore the principles, approaches, strategies and techniques for designing, analysing and managing complex healthcare systems. You will also learn to measure efficiency and improve effectiveness and productivity without compromising quality or safety.

This course will provide you with an insight into health systems modelling, e-health, and health or medical informatics. You will understand the workings of health systems and the processes that have impact on the industry today, such as the transformative abilities of technology and data. You will gain the essential knowledge to manage the integration of people, systems, and technologies to ensure the delivery of consistent high quality, person-centric care.

Programme structure

The structure and weighting of this course is slightly different to our other postgraduate programmes. You will complete eight modules and a dissertation over a three year period to gain your MSc.

Modules will be delivered by staff in our Institute of Digital Healthcare, in collaboration with Warwick Medical School.

We also deliver a custom version of this programme for NHS employees. Please contact us for more information.

Core modules

- ▶ Leading Change in the Healthcare Environment
- ▶ Quality and Productivity in Health Service Systems
- ▶ Operational Management and Clinical Systems Improvement
- ▶ Introduction to Health Informatics
- ▶ Electronic Health Record Systems
- ▶ Resource Management in Healthcare Service Delivery
- ▶ Epidemiology and Statistics
- ▶ Introduction to Health Economics

What is the Institute of Digital Healthcare?

Based at WMG, the Institute of Digital Healthcare is a collaboration between WMG, Warwick Medical School, and the NHS. Its aim is to improve people's health and wellbeing through the development, evaluation, and use of innovative digital technologies and services.

in partnership with



SME programmes

WMG has a proven track record in assisting small and medium-sized companies by providing them with access to technology, and business support networks. We have now expanded that support into leadership and management through a tailored education programme.

Innovation Business Leadership

Our Postgraduate Award in Innovation Business Leadership is primarily directed at fast moving SMEs who rely on innovation to gain competitive advantage.

The programme is about making the latest business and management research comprehensible and engaging so that participants can apply powerful insights back into their own businesses and see results. Five separate three-day modules are delivered over the course of a year:

- ▶ The Strategic Innovation Context
- ▶ Leading, Managing and Building Skills
- ▶ Innovation, Operational Efficiency and Quality
- ▶ Financial and Commercial Awareness and Funding
- ▶ Selling, Marketing and Reputation Management

Modules are augmented by a programme of technology and innovation-focused breakfasts, and evening seminars, led by WMG's SME Team. There is also potential for 1:1 and team coaching sessions in order to maximise transfer of learning and subsequent organisational payback.

Delegates are able to network with peers from a variety of sectors, build their confidence and skills in thinking differently about their business, and earn a Postgraduate Award from the University of Warwick.

"If you'd have asked me before the course, 'are you an innovative and creative person?' I'd have said 'absolutely not', but by the end I was thinking 'was that me, did I do that?' It's a fun environment to learn in and you're putting things into practice and having a go. I've been able to bring some of the activities back into the workplace and we've already had some really good outputs from that, particularly around strategy. It's been a really valuable experience."

Theresa Williams,
Finance Director,
Brandauer

"I think it's really important for a progressive company to be at the forefront of any developments in an industry, and working with WMG has given us just that."

Mark Drinkwater,
Managing Director,
JSC Rotational

Custom programmes in the UK

We specialise in creating programmes suited specifically to your business. We can work with you to create new content or adapt and customise existing programmes to meet your needs. The following are just some examples of what we can do.

Supply Professionalism Programme

Our Supply Professionalism Programme, developed with partner companies in the process industry, is the key education platform for supply managers, and managers in operations, at AstraZeneca, Fuji DB, PZ Cussons, GSK, and Syngenta. This unique Master's level programme enhances integrated contributions throughout the supply chain. As well as a Postgraduate Certificate from the University of Warwick, successful participants gain a route to a Master's degree with us.

Over eight modules, delegates gain the latest knowledge, techniques, and skills that enable them to contribute effectively and strategically in a global supply chain environment. Each area of study is applied directly back into the organisation through work-based projects and assignments.

- ▶ Strategic Decision Making
- ▶ Personal Leadership and Change
- ▶ Delivering Through Operations
- ▶ Supply Chain Strategy
- ▶ Compliance Management
- ▶ Performance, Evaluation and Control
- ▶ Product Lifecycle Management
- ▶ Innovation

The programme is now open to a wider network of companies, beyond the original partners, who have a challenging and complex supply process.



AstraZeneca



PZ
Cussons

syngenta

FUJIFILM

Mark Peacock,
Head of Global Supply, Syngenta

The unique value of the SPP programme is its continuous refinement to meet the changing needs of the companies. It is a fundamental platform for capability development.

Manufacturing Awareness

This accredited course, developed for companies or groups that work with manufacturing businesses, helps delegates become more effective in engaging with their manufacturing business clients and contacts. It has since run extensively for managers at Lloyds Banking Group and Santander, and for a variety of other organisations in the financial and legal sectors.

Delegates gain a better understanding of the needs and processes of manufacturing companies, and of manufacturing sector business concepts, terminology, issues and complexities. The content has been carefully designed to enable delegates to see sector issues from the viewpoint of the manufacturing business manager.



LLOYDS BANK

Dave Atkinson,
Head of Manufacturing and Key Markets,
Lloyds Banking Group

We have continued to invest heavily in the education of our team of relationship managers to provide them with valuable sector insight and understanding to support our clients in the Manufacturing sector. WMG have been instrumental in delivering a first class programme that has been extremely beneficial in helping over 200 of our managers become recognised as trusted advisors in the manufacturing communities across the UK. Our managers find the training comprehensive, demanding and rewarding

Technical Accreditation Scheme

As a key partner in Jaguar Land Rover's Learning Academy, WMG leads on delivery of the Technical Accreditation Scheme (TAS) for Jaguar Land Rover employees working within the fields of future vehicle technologies and virtual engineering. Working alongside the Universities of Cranfield, Loughborough, and Coventry, we have developed a unique portfolio of taught postgraduate courses tailored to the needs of this global company.

TAS is fully endorsed by the Royal Academy of Engineering, and accredited by the Institution of Mechanical Engineers, and the Institution of Engineering and Technology.

The scheme allows employees to mix and match a variety of Master's level modules according to their needs within the business, as well as their individual and professional development needs. Assessment is through a post-module assignment and credits can be put towards a number of qualifications, ranging from a Postgraduate Award to a Master's degree.

We are now delivering the same modules to JLR staff in India, examined and accredited in the same way as in the UK.



José Lopes,
Head of Technical Excellence,
Jaguar Land Rover

The development of our engineers is business critical to Jaguar Land Rover, ensuring continued innovation and technical excellence in the delivery of premium cars and all-terrain vehicles. The Technical Accreditation Scheme is our innovative and progressive approach to skills growth, making the most of the excellence of our university partners in delivering cutting edge education.

UTC Aerospace Leadership Scheme

Before their takeover by UTC, Goodrich Engine Control Systems asked us to further develop their Operational Leadership Development Programme for the engine control area of their business. We worked with Goodrich to deliver the subsequent programme in both the UK and US, and expanded the programme to cover the Actuation Systems part of the business.

Since Goodrich's takeover by UTC, WMG has continued to work with the organisation to develop and deliver the programme in a highly changing and dynamic environment

The current UTC Aerospace Systems Operational Leadership Development Programme leads to a Postgraduate Award in Business Leadership, with modules in Financial Analysis and Control Systems, Leading Performance, and Creating Change Capability, as well as a company-based project.



Grant Weston,
Learning and Development Manager,
UTC Aerospace Systems

Over the last six years we have worked in partnership with WMG to create a world class leadership development programme. Investing in our people is the key to long term, sustainable, organisational performance. We operate in a competitive market and our people are the difference maker in what we can achieve. The programme we have developed with WMG balances the theoretical and the practical, allowing immediate application of new skills, abilities, and knowledge throughout our business.

MSc in Systems Engineering Technical Leadership

This is a three year part-time MSc, designed to meet the needs of GE Aviation when developing their Systems Engineering teams. It will significantly enhance their skills in the roles and responsibilities of a technical leader in this demanding, highly complex, and fast-paced environment.

Delivered by WMG, with the support of the University of the West of England, the programme comprises eight five-day modules (each followed by an associated work-based assignment) and a work-based project/dissertation in the third year. Successful completion leads to an MSc from the University of Warwick.

The eight modules comprise:

- ▶ Collaborative Working
- ▶ Opportunity Development Realisation
- ▶ Requirements Management and Architecture Conceptualisation
- ▶ Systems Verification
- ▶ Systems Integration
- ▶ Technology Management and Innovation
- ▶ Systems Engineering Management
- ▶ Platforms and Major Systems

The first cohort joined the programme in 2015 and planning has already started for recruitment onto the second cohort starting in 2016.

GE Aviation

Custom programmes overseas

Our education programmes are not limited to the UK. We are able to deliver intensive custom programmes for a range of companies and organisations overseas, either through our partner teaching centres, or directly on site.

China

Since 1998, we have enjoyed a close working relationship with the Chinese government body responsible for all overseas training; the State Administration of Foreign Experts Affairs (SAFEA).

Working with SAFEA, we have delivered training courses tailored to the needs of managers in most of the major industries and institutions across China. This includes companies in banking, construction, oil and gas, the automotive industry, aviation, aerospace, transport, and defence, in addition to the provincial governments.

In recent years, we have designed and delivered intensive short programmes for the senior managers of major organisations such as the China Aviation Industry Corporation (AVIC) and China Aerospace Talent Development and Exchange Centre (CA-TDEC). We are also working with major institutions in China such as Beijing Academy of Science and Technology (BJAST), Beijing Vocation College of Labour and Social Security (BVC) and Zhejiang Province Economic Information Commission (ZPEIC).

WMG/SAFEA Alumni have now reached very senior positions in many areas of Chinese industry and government.



India

We have 20 years' experience delivering programmes for the Indian market, beginning with a Master's degree in Engineering Business Management for the Confederation of Indian Industry (CII). Delivered in Mumbai by visiting WMG tutors, the programme is available to managers from all of the CII's 6,000 member companies.

At the Bharat Forge headquarters in Pune, we deliver an MSc in Engineering Business Management to employees of the Kalyani Group company's plants not only from across India, but worldwide.

For TVS Motors, we have developed a 'Project Management Academy', delivering four separate modules over a period of six months. At Tata Group, we have delivered a number of short intensive courses, including in Project Management. We also work with Bombay Dyeing and Bajaj Auto on custom short programmes.



Confederation of Indian Industry
Since 1895

Postgraduate module list

All MSc programmes (with the exception of HOMS), require completion of ten modules, plus an Induction and the Research Methodologies short course. Our full range of Master's modules is below.

For the core requirements and elective options for each Master's degree, please refer to the particular programme page.

For the core requirements for a Postgraduate Award or Postgraduate Certificate, and requirements for industry body accreditation, please call us on **024 765 23976**, or email wmgptmasters@warwick.ac.uk.

Management modules

Business

- ▶ Business Model Generation
- ▶ Business Strategy and Strategic Management
- ▶ Collaborative Leadership
- ▶ Financial Analysis and Control Systems
- ▶ Financial Strategy
- ▶ International Joint Ventures
- ▶ Leading Change
- ▶ Legal Aspects of Global Business
- ▶ People in Organisations
- ▶ Strategic Marketing

Operations and technology

- ▶ Advanced Materials and Processes
- ▶ Applied Statistical Methods
- ▶ Business and Operations Design
- ▶ Innovation
- ▶ Leading Performance
- ▶ Lean Principles and Application
- ▶ Logistics and Operations Management
- ▶ Managing the Multi-Project / Programme Environment
- ▶ Operations Strategy for Industry
- ▶ Procurement and Inventory Management
- ▶ Product Design and Development Management
- ▶ Programme and Project Strategy

- ▶ Project Planning, Management and Control
- ▶ Quality Management and Techniques
- ▶ Reputation and Relationship Management
- ▶ Service Design and Delivery
- ▶ Service Support Technologies
- ▶ Supply Chain Management
- ▶ Technology Management
- ▶ Transport Techniques and Management

Specialist modules

Automotive

- ▶ Automotive Hybridisation and Electrification
- ▶ Design for the Environment
- ▶ Energy Storage and High Voltage Automotive Systems
- ▶ Lightweight Materials and Structures
- ▶ Next-generation Automotive Propulsion Technology
- ▶ Problem Solving with Statistics
- ▶ Quality, Reliability and Maintenance
- ▶ Systems Modelling and Simulation

Cyber security

- ▶ Cryptosystems and Data Protection
- ▶ Cyber-Intelligence and Operations
- ▶ Cyber Physical Systems
- ▶ Digital Forensics
- ▶ Enterprise Cyber Security
- ▶ Industrial Espionage and Counterfeiting
- ▶ Information Risk Management and Governance
- ▶ Security Architectures and Network Defence

Health services (MSc HOMS only)

- ▶ Electronic Healthcare Records Systems
- ▶ Epidemiology and Statistics
- ▶ Introduction to Health Economics
- ▶ Introduction to Health Informatics
- ▶ Leading Change in the Healthcare Environment
- ▶ Operational Management and Clinical Systems Improvement
- ▶ Quality and Productivity in Health Service Systems
- ▶ Resource Management in Healthcare Service Delivery

Fees

All fees shown are for delegates enrolling in 2016.

Custom programmes will be scoped and costed individually.

Undergraduate

Qualification	Cost	Completion within	Modules
Applied Engineering Programme (Bachelor of Engineering)	£28,800 (non-residential)	4 years	Years 1 and 2: six separate five day blocks per year. Years 3 and 4: total of ten separate five day blocks, plus two individual projects

Post-experience

Qualification	Cost	Completion within	Modules
Aspiring Leaders (Post-experience Certificate)	£5,250 (residential)	12 months	Six separate three day modules, plus two work-based assignments/projects

Postgraduate

Qualification	Cost	Completion within	Modules
Short course*	£1,910 (residential)	4.5 days	One 4.5 day module plus a work-based assignment
Innovation Business Leadership Postgraduate Award (for SMEs)	£5,950 (residential) £4,750 (non-residential)	12 months	Five separate three day modules, plus work-based assignments
Postgraduate Award	£5,650 (residential)	12 months	Three separate 4.5 day modules, plus three work-based assignments
Postgraduate Certificate	£11,050 (residential)	18 months	Six separate 4.5 day modules, plus six work-based assignments
Master's Degree**	£23,180 (residential)	3 years	Ten separate 4.5 day modules, plus ten work-based assignments, and a dissertation

* Short courses, Awards and Certificates carry credits towards other programmes for a period of up to five years after successful completion of the work-based assignment.

**Please contact us for fees for MSc Healthcare Operational Management.



Excellent transport and road links

- ▶ 1 hour to London by train
- ▶ Nearest airport - Birmingham International - 20 minutes
- ▶ Nearest train station - Coventry 10 minutes

Getting in touch

- ▶ go.warwick.ac.uk/wmgptmasters
- ▶ wmgptmasters@warwick.ac.uk
- ▶ +44 (0)24 765 23976

WMG Professional and Executive Programmes
Engineering Management Building
Westwood Campus
University of Warwick
Coventry
CV4 7AL
United Kingdom