WMG
THE UNIVERSITY OF WARWICK

FULL-TIME
MASTER'S PROGRAMME 2019-20

MANAGEMENT | ENGINEERING | TECHNOLOGY | INNOVATION

Welcome

"The global market place must have leaders and entrepreneurs with the spirit to challenge conventional thinking in order to support its future. To make an impact in business and industry today, you are expected to be a problem solver, team player, practitioner and strategist. At WMG we will help you to develop the vital mix of knowledge and skills you'll need to create impact throughout your career."

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

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Welcome to Warwick

Warwick creates an inspiring academic environment. We're always looking for new ways to make things happen. Our welcoming campus is a safe and supportive space in which you can make an impact. That's why we are ranked so highly in the lists of great UK and world universities.

By choosing to study at Warwick, you will make a significant step on your life journey.

A vibrant campus university

Studying at a campus university means experiencing a real sense of community and belonging. Warwick has an award-winning campus situated in the heart of England, adjacent to the city of Coventry and county of Warwickshire. The social, sporting and academic facilities at Warwick are wide-ranging; with supermarkets, shops, banks, restaurants, bars and sports facilities all situated on, or within walking distance of, Warwick's campus. You will be studying in an attractive, lively and safe environment. London is just one hour away by train, so you will have the added advantage of easily being able to explore this world city.

An exciting student life

With over 250 student societies and 70 sports clubs to choose from, you will lead a full and exciting life beyond the classroom. Warwick's international community welcomes students from over 140 countries and organises a wide range of high profile student-led social events, summits and conferences. The Students' Union provides entertainment including club nights, live music, and comedy. Warwick Arts Centre is one of the largest performing and visual arts complexes in the UK, and offers a diverse programme of film, music, dance and creative arts.

Accommodation: your home away from home

Our dedicated accommodation team provides support to postgraduates in arranging and managing your university housing, either on-campus or off-campus. Off-campus properties are located in nearby Coventry, charming Leamington Spa, and historic Kenilworth. Connection to campus is fast, with public transport taking between 10 to 25 minutes depending on location.

Outstanding academic resources

Warwick is consistently investing in the academic learning environment for all students. You will have access to over 1 million printed works and 48,400 e-journals and e-books, as well as multimedia-assisted study areas. Warwick's Master's Skills Programme will help to develop your professional and research skills through regular workshops and online resources.

A tailored careers service

Our aim is for you to become successful and highly employable. Warwick Careers and Skills provides 1-1 support to help you build a strong CV and develop an effective career planning strategy. Practical careers-focused workshops strengthen your interview, presentation, and networking skills, and regular careers events, bring you closer to potential employers. We offer life-long careers support so whatever stage of your career you are at, you can still benefit from Warwick's expertise and connections.

> "WMG's education programmes provide high quality education with the latest relevant and innovative subjects to meet today's business and industry needs. There is a continuous focus on improving academic standards with ongoing adaptation of courses and content."

Professor Sujit Banerji
Professor of Operations Management
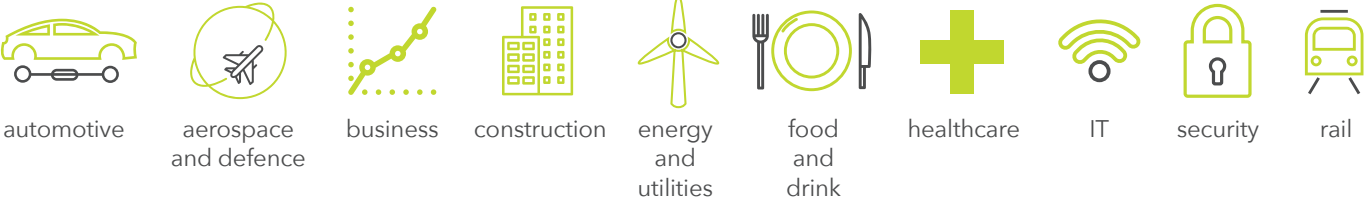Executive Director, WMG Education

Why choose WMG?

We are a multidisciplinary, research-led department renowned for collaborative R&D with global companies, and industry relevant education. Our depth of expertise is across the areas of business transformation, manufacturing, systems, materials, and design. Academic excellence with industrial relevance has always been at the heart of what we do. It's what makes us unique.

We offer you a unique opportunity to gain a world class management education with real business and industry application. As a student with us you will gain and develop the knowledge and academic skills to help you impress future employers. Alongside this, you will be challenged to develop the essential practical and soft skills to make you truly outstanding. We will encourage you to be creative, to develop your entrepreneurial spirit, and to think on a global scale.

Our research capabilities

Theme	Research group
Design	Engineering Psychology
	Experiential Engineering
	Visualisation
Materials	Engineering Materials and Manufacturing
	Science and Technology of Steel Products and Processing
	Nanocomposites
	Sustainable Materials and Manufacturing
	Electrochemical Engineering
Manufacturing	Net-shape Manufacturing
	Metrology
	Automation Systems
	Digital Lifecycle Management
Systems	Energy and Electrical Systems
	Biomedical Informatics, Imaging, and Healthcare Technology
	Cyber Security
Business transformation	Service Systems
	Operations and Supply Chain Strategy

Sectors we work with

automotive | aerospace and defence | business | construction | energy and utilities | food and drink | healthcare | IT | security | rail

Master's programme

Master's study is very different to undergraduate study. You will develop skills in critical analysis, you will hone your research skills, and you will reach a much deeper level of learning.

The skills you'll develop during your Master's year will add significantly more value than the academic content alone. You will be surprised and impressed by the degree of personal development you experience: you'll gain confidence and leadership skills through team work, simulations, presentations, and research. The programme is not just about what you're studying, it is about helping you to see the bigger picture, developing you as a person, and turning you into a competent manager and future leader. We provide as much support as possible through workshops, study skills sessions, and masterclasses. Being a Master's student requires you to take a higher degree of responsibility for your learning and development – this is an exciting, rewarding and challenging journey.

Programme structure

Our Master's programme is 12 months in duration and runs from September to September.

Typically, our courses are structured so that you take a combination of 9 modules, complete 9 post-module assignments and execute a major research project (dissertation). There are some exceptions so please see course pages for specific course information.

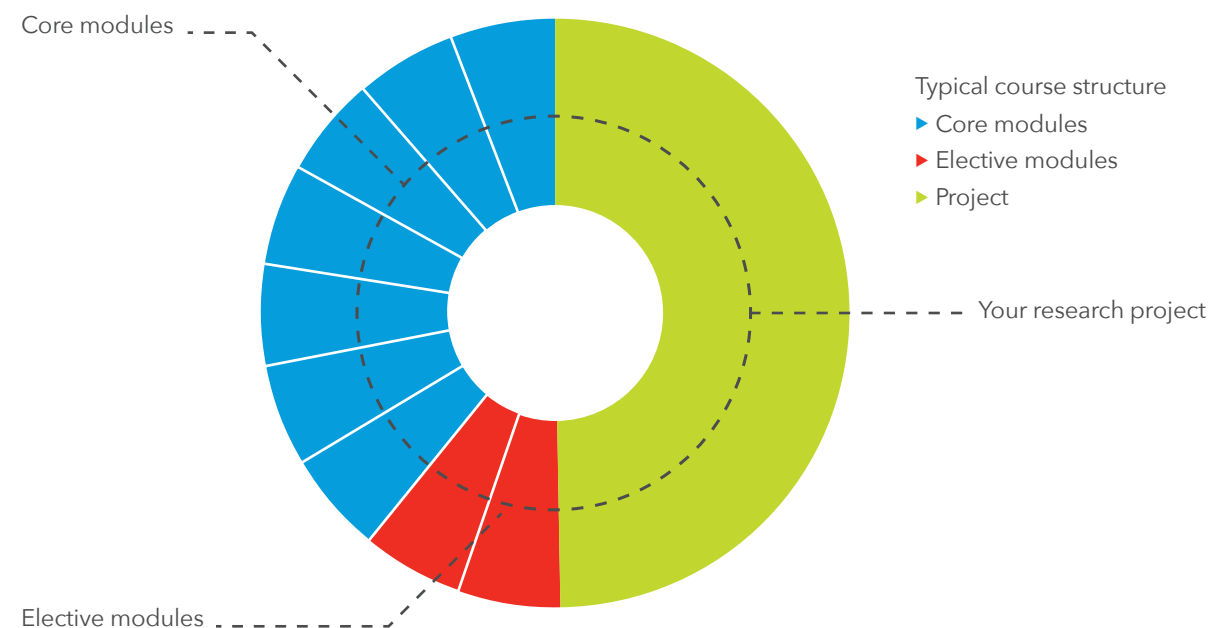Our courses are measured in CAT points.

1 CAT = 10 hours of learning

1 module = 10 CATs (100 hours) or 15 CATs (150 hours)*

Your project = 90 CATs *

*HOM and CSE have 8 x 15 CAT modules and a 60 CAT project

The research project represents 50% of the Master's credits (or 33%* for HOM and CSE) and you should work on it throughout the year, alongside your modules.

Core modules

Elective modules

Typical course structure
▶ Core modules
▶ Elective modules
▶ Project

Your research project

Modules

Most modules are taught in intensive one-week blocks, from Monday to Friday, 9.00am – 6.30pm. Some modules are taught over two weeks, and occasionally, you may be required to attend weekend sessions. These one-week blocks (nine in total over the academic year) are scheduled at intervals from October through to June.

Core modules are compulsory and relate specifically to the course you have chosen to study (see course pages 8-33 for details).

Elective modules are chosen from a wider list, allowing you the flexibility to tailor the programme in line with your specific interests visit our website for a full list of modules offered in 18/19).

Project

Each student undertakes a major individual project, which will develop your research and analytical skills, and enable you to specialise. This usually accounts for 50% of your overall credits and is submitted in the form of a dissertation of approximately 20,000 words. You will have an oral examination at the end of the year to defend your dissertation.

Towards the beginning of the course you will be provided with a list of projects relevant to your specific course, and closely related to research developments in industry or research at WMG. Alternatively, you may define your own project related to your individual career path or aspiration, in consultation with an appropriate academic supervisor.

Project support

You will have regular progress meetings with your project supervisor throughout the academic year. We provide extensive support to strengthen your academic and research skills with regular workshops and seminars dedicated to academic writing, project planning, research skills, and mind-mapping, in addition to the research methodology module.

Work on your project runs alongside your module work. You are expected to devote an appropriate portion of your time, and intellectual effort, to the project throughout the year.

Learning style

By blending lectures with seminars and practical exercises, we ensure you are always interacting with your peers and tutors. We use case studies, simulations, and industrial games to encourage teamwork and practical grounding of the course material. Technology enabled learning, e-learning and forum activities also support classroom learning.

Class sizes are deliberately kept small, with around 30 students in each, to encourage interaction. Larger scale lectures are delivered for some modules and are backed up by seminar and syndicate activities.

Our module leaders are experts in their fields. Guest speakers from industry and government also contribute regularly, bringing real-world insight into your learning experience. You will have lots of opportunity to attend lectures and seminars from distinguished researchers throughout the year.

Assessment

Modules are assessed by assignment, not exam, although for some modules there may be a test that will form part of the assessment. After each module, you will be assessed by a written post-module assignment (PMA) based on the learning objectives of that module. This is typically a further 40 to 60 hours of work and consolidates your learning. Some modules will also include an in-module individual or group assessment.

Industrial visits

Visits to locally based national and international companies provide an opportunity for you to see real operations in action. In the previous years, these have included leading retailers Amazon, Asda and Argos; car manufacturers including Jaguar Land Rover, Morgan Motors, Delphi Automotive, and Prodrive; food and drink manufacturers such as Thornton's, Dairy Crest, Two Towers Brewery; and logistics companies TNT and DHL.

MSc Engineering Business Management (EBM)

Progressive, technology-led companies are looking for people with both the practical engineering skills and the management skills to drive productivity and profitability.

Who is the course designed for?

EBM is designed for graduates who want become managers or leaders of technology-based organisations. It is particularly suited to students with an engineering, scientific or other technical background, who are looking to understand and develop management expertise. It is also appropriate for students who have a business or even a social science background and are looking to move into an engineering related sector.

This course has a good mix of students with prior work experience and recent graduates. It attracts students from across the world with 75 nationalities currently being represented in the department. EBM is one of our largest courses and has an intake of around 120 students each year, divided into teaching groups of approximately 30 students per group.

What will the course provide?

This course delivers a broad education in management and business, and will equip you with the analytical tools and techniques to improve internal and external operations.

During the course of the year, you will develop skills in the research, analysis, and evaluation of complex business problems, and gain a methodical approach to problem solving and decision making. You will learn about the processes and technologies used by engineering businesses, and will develop an understanding of the functional relations between business divisions that can optimise efficiency and competitiveness.

The course focuses on the key value adding activities of: market, product and process development; operations, logistics and supply chain management; and core and emerging technology. The focus on value creation for technology-based organisations is a key differentiator of EBM.

Your project

Your project is worth 50% of your final grade and supports you in developing your personal research skills. This should cover the broad area of Engineering Business Management and can be related to the management of companies in a wide range of different industrial sectors. Various aspects of business management can be addressed such as operations, financial, human resources, supply chain, or strategic management issues.

After you graduate

As a graduate of EBM you can expect to be employed as a leader of business development, manufacturing, quality assurance, human resources, or customer service in a wide variety of manufacturing or service organisations, particularly where technology plays a significant part in business success.

Recent graduates have gone on to work in a wide range of companies from manufacturing through to finance and consultancy. There are many different career paths open to you as an EBM graduate – a few recent job titles have been listed here: Customer Operations Manager, Project Controller, Trade Analyst, Consultant Analyst, Engineering Project Manager, Head of Assembly for an automotive manufacturer, Senior Procurement Manager, Investment Strategy Engineer, Product Marketing Engineer, Technology Analyst, and Supply Chain Consultant.

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

IET Accredited Programme
The Institution of Engineering and Technology

"The Engineering Business Management course is great for students who wish to broaden their skillset and gain valuable insight into the everyday operations and management practices of engineering businesses. The course was taught by interesting lecturers who were able to use their experience to bridge the theoretical side of subjects with relevant industry applications. The combination of lectures and syndicate work, which involved working within dynamic cross-cultural teams, created a fun and engaging learning experience. EBM has definitely provided me with the foundation to undertake a future managerial role within an engineering business."

Bangali Bangura, Switzerland,
EBM student 2016-17

Key facts

Entry requirements:
British Second Class Honours degree or overseas equivalent in a variety of disciplines including Engineering, Science, Business.

Language requirement:
(applies to non-native English speakers)
IELTS: 6.5
PTE: 62
TOEFL iBT: 92

Study programme:
Taught modules – assessed by:
▶ Post-module assignments (3,000 – 4,000 words each)
▶ In-module assessment (for some modules)

Research project – assessed by:
▶ 20,000 word dissertation
▶ Oral examination

Core modules: x 7
▶ Financial Analysis and Control Systems
▶ Organisations, People and Performance
▶ Project Planning, Management and Control
▶ Operations Strategy for Industry
▶ Logistics and Operations Management
▶ Quality, Reliability and Maintenance
▶ Product Design and Development Management

Elective modules: x 2
Two to be chosen from the full module list on website (subject to restrictions)
▶ Manufacturing Technology (requirement for non-engineers)

Course duration:
12 months duration
Start date: 30th September 2019

Tuition fees:
UK/EU: £14,115
Overseas: £25,870
Scholarships available

Applications:
warwick.ac.uk/wmgmasters/entry

Contact:
wmgmasters@warwick.ac.uk

MSc International Technology Management (ITM)

In the context of a global business environment, this programme is about how to deliver value and benefit to ourselves and our customers through the exploitation of innovation and technological change.

Who is the course designed for?

ITM is designed for graduates with an engineering, science or technology background who aspire to a leadership position in high-tech, high-growth, globally operating companies. Candidates with a business qualification and significant work experience within a technology role or environment will also be considered.

This course has a good mix of students with prior work experience and recent graduates. It attracts students from across the world with 75 nationalities currently being represented in the department. We usually take a single cohort of up to 30 students on this Master's steam, making it a very close-knit group.

What will the course provide?

Technology Management is of strategic importance to companies and governments worldwide and is essential for national competitiveness and prosperity. This course focuses on emerging technologies and the approaches, tools and techniques to manage these technologies in a global, collaborative environment. Through the course, students will gain the expertise to manage the development, acquisition and operation of technology, and to contribute to the management of international operations. The programme aims to create flexible individuals who can analyse business opportunities, operationalise technologies, and innovate in ways of working.

In the current year (2018 entry) the modules delivered on ITM include: Technology Management | Global Business Environment | International Joint Ventures | Collaborative Produce Development | Product Design and Development Management | Supply Chain Integration | Organisations People and Performance | Financial Analysis and Control Systems.

For 2019 entry, we aim to significantly boost the technology management element of the course, coupling it with an increased appreciation of emerging technologies, systems thinking, innovation and business change. Proposed modules include: Technology Management | Emerging Technologies for Business | Systems Thinking and Systems Engineering | Managing Innovation and Change | International Joint Ventures, plus electives from Design and Technology, or Business & Operations specialisms.

NB. At the time of printing, the 2019 structure is pending full approval. Please refer to our website for updates and detailed content, or contact the department to discuss.

Your project

Your project is worth 50% of your final grade and supports you in developing your personal research skills. Through your project you will have the opportunity to focus on a topic within an area of particular interest to you. For ITM students, this should relate to the management of technology or technical functions within an international context.

Some examples of previous project areas include:

▶ Business process outsourcing
▶ The effects of globalisation on the UK automotive Industry
▶ Learning and knowledge in managing technology
▶ International trade regulation and manufacturing
▶ The real costs and risks of global sourcing: A comparison of India and China

After you graduate

As an ITM graduate there are numerous career paths open to you. Having developed a strong understanding of how technology can best be exploited to contribute to global success, you will be especially suited to roles in companies which operate internationally. You can expect a leadership position within a variety of key functions in manufacturing or service organisations, particularly where technology plays a significant part in business success.

Recent graduates have gone into various consultancy, project management, analyst, account management and systems engineering roles, with companies such as: IBM, Jaguar Land Rover, Unicorn e-Learning, Bladon Jets, Huawei, Avanade, Telexpress, Vidyo Telecommunications, and Cisco Systems.

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

IET Accredited Programme
The Institution of Engineering and Technology

" As a Technical Product Manager, I manage projects to develop and improve tailored platforms used by some of the world's best-known travel companies. I've recently been involved in contract negotiations and what I learned at WMG gave me the confidence to make a really positive contribution. The leadership skills I developed during my studies have given me the confidence to suggest new and more effective team structures, stand up for my team and change the way we work so that people enjoy their jobs while being as productive as possible. When I chose to study at WMG, I didn't realise that it would make me such a strong leader."

Ravi Jassal, UK,
ITM graduate 2014-15,
Technical Product Manager, Ping An, a Forbes Top 50 company, China

Key facts

Entry requirements:
British Second Class Honours degree or overseas equivalent in a variety of disciplines.

Language requirement:
(applies to non-native English speakers)
IELTS: 6.5
PTE: 62
TOEFL iBT: 92

Study programme:
Taught modules – assessed by:
▶ Post-module assignments (3,000 – 4,000 words each)
▶ In-module assessment (additional for some modules)

Research project – assessed by:
▶ 20,000 word dissertation
▶ Oral examination

Core and elective modules -
see page 10

Course duration:
12 months duration
Start date: 30th September 2019

Tuition fees:
UK/EU: £14,115
Overseas: £25,870
Scholarships available

Applications:
warwick.ac.uk/wmgmasters/entry

Contact:
wmgmasters@warwick.ac.uk

MSc Management for Business Excellence (MBE)

The framework for the Management for Business Excellence degree is the European Excellence Model, created to help organisations develop towards the achievement of sustainable excellence.

Who is the course designed for?

MBE is an innovative MSc degree course designed for those who want to become effective leaders and managers of business excellence in industry. It is suitable for high achievers who want to be challenged in the way they think about business management and problem solving.

The course is all about understanding how organisations work; it takes a holistic look at organisations, the inter-relationships between departments within them, and how to optimise the use of available resources. Upon graduation, you'll be ready to progress the capabilities of organisations, by making decisions on improvement, and by understanding how these decisions will affect departments within the business.

Typically students will have a background in engineering, business management, finance or economics, but MBE is open to graduates from any academic background.

What will the course provide?

Designed to deliver a detailed understanding of the philosophies, strategies, processes and techniques that enable change and deliver business excellence, this course will provide you with a distinctly different learning experience to what you will have previously been used to.

The style of learning is active. You will make choices about what you wish to learn and you will decide how best to achieve your learning objectives; all of this will be facilitated by our expert MBE course tutors.

Teamwork plays a central role throughout the course. By working collaboratively with your international colleagues, you'll develop a rich, global perspective. Through classroom simulations, you'll generate credible and practical solutions to real-business problems. Most importantly, you'll learn to think critically about topics and issues that come to the fore; challenging views and growing both as an individual and as leader of business.

Using a range of blended learning approaches, including e-learning, students are provided with a rich learning environment in which you will develop a deep understanding of content. The programme is supported by tutorials and seminars to discuss and explore web-based content.

MBE coursework will be formatively assessed. This means that you will be required to pass your modules, and you will be given feedback on the strengths of the work and areas for improvement, but no mark will be awarded.

Your project

A fundamental part of this course is to prepare you for your career after graduation and help you explore the possible futures available to you. Alongside the core modules, which will broaden your educational experience, you will pick a research-based project in a particular area that interests you.

Your project is an extended piece of work requiring at least 50% of your time and effort over the course of the year. For MBE, your project alone will determine the award of a degree with or without a merit or distinction. It supports you in developing your personal research skills and allows further integration of understanding.

Recent dissertation titles have included:

▶ An investigation into the links between Corporate Social Responsibility (CSR) and the European Excellence Model

▶ Developing a tool to audit organisational learning from six sigma projects

▶ Application of excellence models in Chinese engineering enterprises

▶ Creating a suitable improvement and learning model to achieve fundamental improvement in the construction industry

After you graduate

MBE graduates have gone on to become managers and leaders in business development, new product development, consultancy, quality assurance, human resources management, customer services, manufacturing management and engineering management. With further experience, you would expect to attain a key executive role and be responsible for leading strategy and policy. You will have developed the skills and knowledge necessary to benchmark organisational performance against world best-in-class. MBE graduates will have the ability to drive corporate transformation and improvement, for all aspects of performance including market share, customer satisfaction, employee development and financial results, to name but a few.

"I am now with a leader in cloud-based distance learning solutions in Cologne, Germany. It was a great opportunity to join a pioneering business that's transforming learning within some of the world's biggest companies. Mine is very much a consulting role, working closely with engineering and pharma companies to develop learning solutions that can empower their workforces and drive their business growth. The knowledge I gained on my MSc course is really helping me here. I feel that I understand businesses and the challenges they face. I can speak to senior people with confidence, and I can quickly gain their respect. The course has transformed me, both as a business professional and as a person."

Carina Latz, Germany,
MBE graduate 2014-15

Key facts

Entry requirements:
British Second Class Honours degree or overseas equivalent in a variety of disciplines including Business, Engineering, Science, Economics.

Language requirement:
(applies to non-native English speakers)
IELTS: 6.5
PTE: 62
TOEFL iBT: 92

Study programme:
Taught modules – formative assessment:
▶ Post-module assignments (3,000 – 4,000 words each)
▶ In-module assessment (for some modules)

Research project – assessed by:
▶ 20,000 word dissertation
▶ Oral examination

Core modules: x 8
▶ Creating Business Excellence
▶ Leadership and Excellence
▶ Robust Decision Making
▶ Process Improvement using Six Sigma
▶ Product Excellence using Six Sigma
▶ Knowledge-based Asset Management
▶ Financial Analysis and Control Systems
▶ Organisations, People and Performance

Elective modules: x 1
Two to be chosen from the full module list on website (subject to restrictions)

Course duration:
12 months duration
Start date: 30th September 2019

Tuition fees:
UK/EU: £14,115
Overseas: £25,870
Scholarships available

Applications:
warwick.ac.uk/wmgmasters/entry

Contact:
wmgmasters@warwick.ac.uk

MSc Programme and Project Management (PPM)

Companies are often strategically organised through a series of projects, programmes, and portfolios, which enables them to focus clearly on specific objectives and manage resources effectively to achieve them.

Who is the course designed for?

PPM is designed for graduates who want to move into project management, either in their current technical and business field, or into a new field of expertise. Students on this course can have a very wide range of academic and professional backgrounds.

Typically we receive graduates from civil and other engineering streams, architecture and design, IT, finance, accounting, business, sciences and social sciences. Approximately 25% of students have work experience before joining this course, and whilst this is beneficial, it is not necessary.

PPM attracts students from across the world – currently 75 nationalities are represented in the department and this course is one of the largest with an intake of over 150 students divided into teaching groups of approximately 30 per group.

What will the course provide?

Programme and Project Management at Warwick will provide you with a broad set of skills which have wide application.

During the course of the year, you'll gain practical experience through applied syndicate activities and current case studies, delivered by professionals in the field. You will develop a methodical approach to the management of financial aspects of projects and programmes and will learn about the strategic management of people in organisations and how this relates to the wider business strategy. You will learn the methodologies, tools, principles and philosophies to effectively contribute to the development and management of small and large scale projects, multiple projects and programmes.

Your project

Your project is worth 50% of your final grade and supports you in developing your personal research skills. Through your project you will have the opportunity to focus on a topic within an area of particular interest to you. This can be related to projects in a number of different industrial sectors and can address many different aspects of project and programme management. Examples of recent projects include:

▶ Managing change in organisations and teams
▶ Developing a serious game for training in project management
▶ Risk-based design for project management systems
▶ Creating change capability in organisations

After you graduate

PPM graduates can expect to be employed in service industries, information technology, engineering or any other business area needing project management skills.

Some of our recent graduates have gone into project planning and management roles with BAE Systems, Alstom Power, Reed Recruitment, Network Rail, Vogue, Disneyland, Ashford and McGuire.

Other PPM graduates have gone on to work with: Ferrovial (Statistical Analyst), IBM (System Analyst), China Everbright Bank (Risk Manager), DTZ (Marketing Officer), Government of Punjab (middle-management), and Evalueserve Business Consulting (Business Analyst).

This course is accredited by the Association for Project Management (APM)

apm Accredited

"One of the things I really love about this course is the fact that it uses group exercises and simulations. In the Management of Change module, the class split into two groups and we ran our own 'companies', with each of us taking on a role within the business. These simulations are designed to replicate what happens in business; providing really valuable preparation for professional life.

I know that the skills I have developed at WMG will help me greatly. Before starting the course I was already a successful project manager. Now I have a much greater understanding both of project management and business."

Botan Rasool, Iraqi Kurdistan, PPM student 2016-17

Key facts

Entry requirements:
British Second Class Honours degree or overseas equivalent in a variety of disciplines. A good level of numeracy is important.

Language requirement:
(applies to non-native English speakers)
IELTS: 6.5
PTE: 62
TOEFL iBT: 92

Study programme:
Taught modules – assessed by:
▶ Post-module assignments (3,000 – 4,000 words each)
▶ In-module assessment (additional for some modules)

Research project – assessed by:
▶ 20,000 word dissertation
▶ Oral examination

Core modules: x 7
▶ Project Planning, Management and Control
▶ Programme and Project Strategy
▶ International Joint Ventures
▶ Managing the Multi-Project/ Programme Environment
▶ Organisations, People and Performance
▶ Management of Change
▶ Financial Analysis and Control Systems

Elective modules: x 2
Two to be chosen from the full module list on website (subject to restrictions)

Course duration:
12 months duration
Start date: 30th September 2019

Tuition fees:
UK/EU: £14,115
Overseas: £25,870
Scholarships available

Applications:
warwick.ac.uk/wmgmasters/entry

Contact:
wmgmasters@warwick.ac.uk

MSc Supply Chain and Logistics Management (SCLM)

As our global reach becomes ever more apparent, there is a need and opportunity for organisations to connect together to deliver added-value to the consumer through interlinked supply chains and efficient logistics.

Who is the course designed for?

SCLM is designed for graduates who want to work within logistics and supply chain management across a variety of business sectors.

Typically students will have a background in engineering, maths, statistics, business or management studies. Highly motivated graduates from other disciplines will also be considered.

This course has a good mix of students with prior work experience and recent graduates. It attracts students from across the world with 75 nationalities currently being represented in the department. SCLM is one of our largest courses with an intake of over 150 students divided into teaching groups of approximately 30 per group.

What will the course provide?

The central content is the concept of a supply network: constructing the relationships which bring it into being; commissioning the technologies which enable it to operate; managing the input, the material and information flow; and distributing the product. This is supported by personal development opportunities in more generally applicable competencies such as statistical methods, quality management, business and industrial law and improving performance.

During the course you'll develop the skills to evaluate, manage, and improve service, operational and supply chain processes, and conduct market analysis. Using enterprise resource planning systems, you will be able to improve the operational functions of a business and develop a broad understanding of strategy development and design.

Your project

Your project is worth 50% of your final grade and supports you in developing your personal research skills. Through your project you will have the opportunity to focus on a topic within an area of particular interest to you. This may be purchasing or outsourcing, material or production control, inventory reduction, material flow, warehousing and distribution, supply chain management, transport planning, product lifecycle management, reverse logistics, or one of many other related areas.

Some examples of recent projects include:

- Simulation of goods handling at an international seaport
- Delivery performance of a steel foundry in Asia
- Analysis of alternative forecasting methodologies
- Forecasting demand in a changing market

After you graduate

As a graduate of SCLM, you could work within a whole spectrum of different manufacturing or service companies, including providers of third party logistics as specialists in supply chain, planning or logistics.

Recent graduates have taken a variety of career paths, and many go on to graduate traineeships, consultancy roles or management positions. Others have gone into analyst or specialist positions including Supply Chain Specialist, Supply Planner, Replenishment Analyst, and Supply Chain Analyst.

This course is accredited by the Chartered Institute of Procurement and Supply (CIPS) and The Chartered Institute of Logistics and Transport (CILT). Graduates may apply for respective memberships on successful completion. NB: Module conditions apply.

"The teaching isn't just academically focused: as well as covering the technical aspects of each subject, we learned how businesses operate in the global arena. Thanks to the regular simulations and practicals throughout the year, I now feel really well equipped to step into a commercial environment and put it all into practice.

I am now planning to start up my own delivery business back in Malaysia. The course has given me so much confidence – I'm looking forward to this next phase of applying the skills I've learned."

Sharuz Sabri, Malaysia, SCLM graduate 2015-16

Key facts

Entry requirements:
British Second Class Honours degree or overseas equivalent in a variety of disciplines.

Language requirement:
(applies to non-native English speakers)
IELTS: 6.5
PTE: 62
TOEFL iBT: 92

Study programme:
Taught modules – assessed by:
- Post-module assignments (3,000 – 4,000 words each)
- In-module assessment (for some modules only)

Research project – assessed by:
- 20,000 word dissertation
- Oral examination

Core modules: x 7
- Supply Chain Management
- Logistics and Operations Management
- Procurement and Inventory Management
- Storage and Warehouse Techniques
- Transportation Techniques and Management
- Organisations, People and Performance
- Financial Analysis and Control Systems

Elective modules: x 2
Two to be chosen from the full module list on website (subject to restrictions)

Course duration:
12 months duration
Start date: 30th September 2019

Tuition fees:
UK/EU: £14,115
Overseas: £25,870
Scholarships available

Applications:
warwick.ac.uk/wmgmasters/entry

Contact:
wmgmasters@warwick.ac.uk

CIPS Accredited

The Chartered Institute of Logistics and Transport | Accredited Degree

MSc e-Business Management (e-BM)

Online engagement is a defining feature of today's business environment. Competence in digital activity is critical to success, be that business profitability, optimised communications, or data management and analysis.

Who is the course designed for?

e-BM has been designed for those who wish to operate effectively in the e-Business environment and to manage or lead either the transformation of existing business processes or the creation of new e-Business activity. It is suitable for graduates from a whole range of backgrounds, including business, marketing, IT, media, science and engineering.

With the exponential growth in e-Business activity worldwide, there is great demand for e-Business professionals who bring particular specialised knowledge and skills. This MSc, therefore, allows you to select from one of five specialisms, providing you with a deeper understanding of one of the key areas of e-Business deployments and tailoring your modules in line with your future career path.

Your project

Your project is worth 50% of your final grade (90 CATs) and supports you in developing your personal research skills. Depending on the specialism that you opt for, your project should focus on management or technology-related issues in companies involved in e-Commerce; digital marketing; digital innovation; digital and data science or digital consultancy.

Work on your project runs concurrently with your module work. In addition to face-to-face meetings, supervisors may expect you to use online collaborative tools to manage and monitor your progress. You are expected to devote an appropriate portion of your time and intellectual effort to the project during the course i.e. approximately 900 hours or 6 months study.

Course modules

You will be required to take 90 CATs worth of modules as part of this MSc programme.

The following three modules are compulsory for all e-BM students.

▶ e-Business Fundamentals ▶ Digital Marketing, Software and Techniques ▶ e-Commerce

In addition to the three modules listed above, you will also take five required modules outlined as part of the specialism that you choose. Please refer to page 19 for further information.

"The practical element of the programme is worth emphasising. For example, in one of our modules we analysed the website of an actual business that wasn't performing too well. As a team, we looked at its good points, its bad points, and how it could be optimised effectively. Our aim was to maximise its performance without increasing costs. At WMG you have time to explore the subject in-depth and understand how the lessons can be put into practice in real business situations."

Vicky Gao, China,
e-BM graduate 2015-16

Our specialisms

These specialisms enable students to select a defined module route through the course. The course name for all pathways is MSc e-Business Management.

Digital and Data Science specialism

With the rapid growth of digitalisation and use of digital technologies and solutions, the analysis of Big Data represents both a significant challenge for modern organisations, and a source for competitive advantage. This specialism gives students a firm grounding in the techniques and tools of Big Data, data science and artificial intelligence, as well as in the digital solutions and business functions that employ these insights to support digitalisation.

Required modules: ▶Big Data, Analytics & Visualisation ▶Cloud Native Computing* ▶Computational Statistics with Python ▶Data Science & Machine Learning ▶Digital Consultancy*

e-Commerce specialism

The e-Commerce specialism will give participants a comprehensive understanding of how to implement effective e-Commerce solutions from both a technical and a business perspective. The modules cover e-Commerce systems (such as CMS tools, cloud technology, and e-Customer Relationship Management systems), as well as related business areas (such as building the necessary supply chains to manage inventory and delivery of goods, and e-Commerce business models and financing).

Required modules: ▶Computer Programming ▶e-Customer Relationship Management ▶Finance for e-Business ▶Information Systems Management ▶Supply Chain Integration

Digital Marketing specialism

Digital Marketing is growing globally both in terms of annual business investment, and the impacts it has on consumer behaviour. This pathway prepares students to effectively utilise Digital Marketing channels (such as social media, search engines, programmatic advertising, and content marketing) to deliver effective digital marketing campaigns. Additionally, the specialism incorporates cutting-edge technologies and techniques for analysing customer data, and achieving digital transformation throughout the organisation.

Required modules: ▶Big Data Analytics & Visualisation ▶Digital Entrepreneurship & Digital Disruption ▶e-Customer Relationship Management ▶Emerging Technology for Business* ▶The Digital Workplace

Digital Innovation specialism

Many successful businesses of are examples of digital disruptors: Amazon on traditional retail, Uber on the taxi industry, Airbnb on tourism, and Spotify on the music industry. The secret to success for such business is carefully blending the potential of digital technologies, with an understanding of customer requirements, and an ability to design innovative new business models. This specialism will enable participants to understand digital technology and transformation, as well helping them to analyse existing industries, develop business models, and to launch new businesses and business initiatives.

Required modules: ▶Digital Entrepreneurship & Digital Disruption ▶e-Customer Relationship Management ▶Finance for e-Business ▶Supply Chain Integration ▶The Digital Workplace

Digital Consultancy specialism*

With the growing complexity of digital technology and architectures, many businesses become increasingly reliant on consultants and external specialists to help them plan, implement and optimise their operations and strategies. This specialism explores some of the latest technologies (including Big Data, artificial intelligence, Internet of Things, Blockchain, 3D printing and more), and many of the key business functions (supply chain, marketing, e-Commerce). Students will develop the skills and techniques required to deliver successful consultancy engagements.

Required modules: ▶Digital Consultancy* ▶Emerging Technology for Business* ▶Finance for e-Business ▶Information Systems Management ▶Supply Chain Integration

Key facts

Entry requirements:
British Second Class Honours degree, or overseas equivalent, in a variety of disciplines including: IT, Media, Communications, Business, Data Science or Technology.

Language requirement:
(applies to non-native English speakers)
IELTS: 6.5
PTE: 62
TOEFL iBT: 92

Study programme:
Taught modules – assessed by:
▶ Post-module assignments (3,000 – 4,000 words each)
▶ In-module assessment (additional for some modules)

Research project – assessed by:
▶ 20,000 word dissertation
▶ Oral examination

Core modules - see pages 18 and 19 for details

Course duration:
12 months duration
Start date: 30th September 2019

Tuition fees:
UK/EU: £14,115
Overseas: £25,870
Scholarships available

Applications:
warwick.ac.uk/wmgmasters/entry

Contact:
wmgmasters@warwick.ac.uk

MSc Innovation and Entrepreneurship (IAE)

New business success typically requires a rare combination of innovation, technical skills, and entrepreneurial know-how. We focus on these to increase the chances of success for your new product or service based businesses.

Who is the course designed for?

IAE is designed for entrepreneurs, or graduates with entrepreneurial flair who are looking to establish their own business.

It is designed for people who see opportunities all around them, and who want to achieve their dreams of creating a business that can harness those opportunities. It is an exciting programme that will give you the mind-set, tools and techniques to turn your ideas into a successful business.

Students join IAE from all academic disciplines, from engineering and business, through to creative arts and humanities. A good proportion of IAE students already have professional experience and are at the stage in their career where they want to launch their own company. Others come as recent graduates, typically from an entrepreneurial family, and are looking at expanding and innovating the family firm, developing new markets and product or service lines.

What will the course provide?

You will learn to apply best-practice approaches to designing, developing, and running your own innovation-driven, often globally orientated, business. It's a practical course, covering the process from generating new business ideas, developing and refining ideas, and designing the infrastructure right through to launching the business. You'll focus on how innovation can be exploited in technological and business contexts, to increase success for new product or services based businesses.

Your project

Your project is worth 50% of your final grade and is devoted to rigorously developing your business idea, so that by the end of the course you will be in a position to launch your business.

The project is run in accordance with a 'New Product Development Plan', developed with a range of industrial partners and tested with real new product business ideas. Work on your project runs concurrently with your module study and you will be appointed a tutor to supervise you.

Throughout the year, you'll cover themes such as business modelling, sales, starting a new business, innovation, leadership, managing change and financial analysis. You will use the latest methods and technologies to support these processes and will have extensive opportunity to both develop and practice your skills for making appropriate judgements regarding the choices in your business development.

After you graduate

Our graduates typically start their own business, and we've seen them become successful in a wide range of sectors including: food and drink, music, electrical manufacturing, digital education, oil and gas, outsourcing, consultancy, fashion, textiles, luxury goods and jewellery, logistics, and finance.

Being an entrepreneur is not just about making money, but creating value to help to improve people's lives. Many of our graduates have developed social enterprises, such as housing projects in refugee camps, food distribution for the needy, digital applications for those with specific learning needs, and various community enterprise programmes.

The skills gained on this course are also extremely valuable for existing businesses, especially where there is interest in moving into new product or service areas. Other IAE graduates are now working for companies such as Vodafone, Samsung Electronics, Nielsen, Cisco, Austrian Airlines, ExxonMobil, Sony, Jaguar Land Rover, Johnson & Johnson, to name but a few.

MSc by Research in Business Transformation.

This 18 month research degree is aimed at those wanting to transform a family business. It provides a deeper understanding of business transformation, entrepreneurship and innovation, plus the skills and confidence to put this into practice.

warwick.ac.uk/wmgmasters/courses/iae/mres

"This course takes you right through the entire process of starting a business, from generating and developing a new idea to launching the enterprise. Each module gave me practical tools that I used right away to develop my idea – it taught me so much! Besides helping me come up with my business idea, the whole study experience at Warwick has helped me improve on a personal level. I'm really excited now to be working with young people and guiding them on their own business ventures!"

Saida Haddad, Jordan
IAE graduate 2014-15
Programme Manager, Badir, International Youth Foundation

Key facts

Entry requirements:
British Second Class Honours degree or overseas equivalent in a variety of disciplines. Applicants should be able to demonstrate their entrepreneurial flair in their Statement of Purpose.

Language requirement:
(applies to non-native English speakers)
IELTS: 6.5
PTE: 62
TOEFL iBT: 92

Study programme:
Taught modules – assessed by:
▶ Post-module assignments (3,000 – 4,000 words each)
▶ In-module assessment (additional for some modules)

Research project – assessed by:
▶ 20,000 word dissertation
▶ Oral examination

Core modules: x 7
▶ Business Model Generation
▶ Establishing a New Business
▶ Leadership
▶ Financial Analysis and Control Systems
▶ Innovation
▶ Sales and Sales Management
▶ Management of Change

Elective modules: x 2
Two to be chosen from the full module list on website (subject to restrictions)

Course duration:
12 months duration
Start date: 30th September 2019

Tuition fees:
UK/EU: £14,115
Overseas: £25,870
Scholarships available

Applications:
warwick.ac.uk/wmgmasters/entry

Contact:
wmgmasters@warwick.ac.uk

MSc International Trade, Strategy and Operations (ITSO)

Modern business trades across international boundaries, so a thorough knowledge and understanding of the management and operational requirements to trade successfully in international markets is essential to success.

Who is the course designed for?

ITSO is designed for graduates looking for an International Business degree that focuses on the application of theory into practice.

Students may have already studied business related programmes, but this course is also very much open to those with other academic backgrounds. Typically the course attracts students from social sciences such as economics or international relations, and those with a more technical background now looking to apply themselves in an international business capacity.

This course has a mix of students with prior work experience and recent graduates. It attracts students from across the world with 75 nationalities currently being represented in the department. ITSO has an intake of over 100 students, divided into teaching groups of approximately 30 per group.

What will the course provide?

This course will give you a comprehensive overview of how international companies operate. It will deepen your knowledge and understanding of the management and operational requirements necessary to trade successfully in international markets. You'll develop a broad set of skills that will enable you to get involved in the whole business process, from initial engagement with a new market right through to the delivery of a product or service.

Throughout the year, you will learn to identify business opportunities, formulate strategic options and define business winning propositions, as well as to manage, lead change and improve operational and supply chain processes within international business.

Because this programme is heavily focused on the application of theory into practice, you will be able to envisage how the skills developed throughout your studies will be used to best advantage in a professional environment.

Your project

The project is worth 50% of your final grade and supports you in developing your personal research skills as well as enabling you to focus on an area of particular interest for your career path.

The project should relate to one or more of the following aspects of trading in an international context:

- International sales and marketing
- Transport, logistics, supply chain, and customs compliance
- Financial management
- Legal aspects of international trade
- Business management and trade strategy
- Operations and service management

After you graduate

After graduating from ITSO, a wide range of career options will be open to you, including managerial roles within: transportation and logistics; business development, relationship management and negotiation; strategy implementation; customs and the legal aspects of international business.

The onus on the practical application of theory means that you'll be in the advantageous position of being able to take on a useful professional role right from the outset, maximising your employment prospects. International trade is relevant across all industry sectors including manufacturing, engineering and automotive businesses, retail and wholesale enterprises, financial services, and other service sector organisations.

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

IOE INTERNATIONAL TRADE

"I was particularly impressed by the depth of industry experience that the tutors brought to the programme – this really made an impact on me. I learned the theory, and understood it clearly, as it contextualised into business scenarios. Each module included relevant practical simulations – it made learning a fun and enriching experience."

Ingrid Caballero, Colombia, ITSO graduate 2015-16

Key facts

Entry requirements:
British Second Class Honours degree or overseas equivalent in a variety of disciplines.

Language requirement:
(applies to non-native English speakers)
IELTS: 6.5
PTE: 62
TOEFL iBT: 92

Study programme:
Taught modules – assessed by:
- Post-module assignment (3,000 – 4,000 words each)
- In-module assessment (additional for some modules)

Research project – assessed by:
- 20,000 word dissertation
- Oral examination

Core modules: x 6
- International Trade
- International Joint Ventures
- Legal Aspects of a Global Business
- Transport Techniques and Management
- Financial Analysis and Control Systems
- Strategic Marketing

Elective modules: x 3
Three to be chosen from the full module list on website (subject to restrictions)

Course duration:
12 months duration
Start date: 30th September 2019

Tuition fees:
UK/EU: £14,115
Overseas: £25,870
Scholarships available

Applications:
warwick.ac.uk/wmgmasters/entry

Contact:
wmgmasters@warwick.ac.uk

MSc Service Management and Design (SMD)

In today's complex business environment, where so much of global GDP is now service-related, service science is both an exciting and crucial area in which businesses must increase their expertise to stay ahead.

Who is the course designed for?

SMD is designed for graduates who are outward looking, forward thinking and interested in designing businesses for the future. It is appropriate for students from all academic backgrounds, who have a broad perspective and understanding that interdisciplinary work is essential for effective service business.

This course has a good mix of students with prior work experience and recent graduates. It attracts students from across the world with 75 nationalities currently being represented in the department. SMD takes a single cohort of up to 30 students, making it a particularly close knit group.

What will the course provide?

Fundamentally, the course will demystify what creates excellent service. You will learn the tools and techniques to confidently design the service systems needed to work well with your customer, and to ensure the best outcomes are achieved. You'll learn to structure a service organisation and look at excellence in service from a variety of international sector perspectives.

Our Service Systems research group has been working alongside leading companies and organisations such as MOOG, IBM, Rolls-Royce, British Airways, and the NHS, to actively shape research and teaching in this area. In engineering companies for example, there has been a fundamental shift from product-centric to service-centric thinking, whereby in order to stay competitive, a key question in any business is 'what is my customer trying to achieve?'

This course will review operationally how you go about using techniques to design service experience, lead change and drive business transformation. It will show you how you go about building reputation, relationships, and brand with your customer. It will help you make sense of big data, and the use of technology to effectively support service delivery.

Your project

Your project is worth 50% of your final grade and supports you in developing your personal research skills. Through your project you will have the opportunity to focus on a topic within an area of particular interest to you. Service is not sector specific and you may carry out your project with a business, public sector organisation or a charity. A number of SMD dissertations have led to journal and conference publications and KTPs (Knowledge Transfer Partnerships).

Some examples of recent projects include:

▶ Lean Six Sigma in service management and design

▶ Mobile technology adoption by consumers

▶ Future business models in the media entertainment industry

▶ The design of a smart FMCG delivery service

▶ Sustainability assessment for spiritual tourism

▶ Measuring service quality in e-commerce

▶ Assessing current technology for visually impaired people in accessing the internet

Students on SMD will have the opportunity to get a certification in 'Lean Six Sigma Green Belt'

After you graduate

This course is aimed at future leaders and managers of service-based organisations. It is not sector specific and is applicable to a wide range of industries including healthcare, finance, IT, travel, retail, education, hospitality and tourism, oil and gas, and even the 'servitisation' of manufacturing companies, looking at the transition from product-centric to service-centric thinking.

As an SMD graduate you could expect to work within operations management, business transformation, customer service, and service support strategy roles within any business, from local SMEs to global organisations.

"Business simulations were an integral part of the programme. Everything we were taught was related to what's happening in industry. That was thoroughly refreshing – I never felt I was learning something for the sake of it. I was shown how to apply what I was being taught in real-life situations.

With regard to the post-module assignments, I liked the way I was encouraged to constantly interrogate and challenge information. I found this a far better way of learning than sitting exams, because you have the time to become totally immersed in the topic. By carrying out your own research and investigations, you learn a whole lot more – and you remember what you've learned. Above all, the course gave me a whole new perspective on how services work."

Valentina Munoz, Venezuela,
SMD graduate 2014-15
Analyst, KPMG's Technology Risk Consulting Team, UK

Key facts

Entry requirements:
British Second Class Honours degree or overseas equivalent.

Language requirement:
(applies to non-native English speakers)
IELTS: 6.5
PTE: 62
TOEFL iBT: 92

Study programme:
Taught modules – assessed by:
▶ Post-module assignments (3,000 – 4,000 words each)
▶ In-module assessment (applies to some modules)

Research project – assessed by:
▶ 20,000 word dissertation
▶ Oral examination

Core modules: x 6
▶ Service Design and Delivery
▶ Service Support Technologies
▶ Reputation and Relationship Management
▶ Leading Change
▶ Financial Analysis and Control Systems
▶ Business Model Generation

Elective modules: x 3
Three to be chosen from the full module list on website (subject to restrictions)

Course duration:
12 months duration
Start date: 30th September 2019

Tuition fees:
UK/EU: £14,115
Overseas: £25,870
Scholarships available

Applications:
warwick.ac.uk/wmgmasters/entry

Contact:
wmgmasters@warwick.ac.uk

MSc Healthcare Operational Management (HOM)

Developed within the Institute of Digital Healthcare, this programme drives the implementation of innovative digital technologies and services to facilitate improvement in the complex healthcare service sector.

Who is the course designed for?

This MSc in Healthcare Operational Management has been designed to fulfil the specific needs and requirements of graduates interested in a management or leadership role within the complex healthcare service sector.

It is suitable for graduates from a broad range of academic disciplines across technical, scientific, medical, management and social sciences. However, strong quantitative skills are required.

This course has an excellent mix of students with prior work experience and recent graduates. It attracts students from across the world with 75 nationalities currently being represented in the department. We take a single cohort of up to 30 students on this Master's stream, making it a very close knit group.

What will the course provide?

Healthcare organisations share commonalities with production facilities, including the need for efficient process flow, change management, and quality standards. As a student you will explore the principles, approaches, strategies, and techniques for analysing, designing, and managing complex healthcare systems. You will learn to measure efficiency and improve effectiveness, productivity, quality, and safety.

Throughout the year, you'll acquire the skills and knowledge to assess organisational performance and drive the development and implementation of innovation in healthcare organisations in order to bring about improvement.

You will learn about the workings of health systems and the processes that have impact on the industry today, such as the transformative abilities of technology and data.

We will provide you with an insight into health systems modelling, e-health, health informatics, and epidemiology. Ultimately, 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.

Your project

Your project is worth 33% of your final grade and supports you in developing your personal research and analytical skills.

Your research will be related to issues of quality and productivity in the healthcare context and will provide opportunity for you to focus on an aspect of particular interest to you – some project examples are listed below:

▶ Implementing innovation in hospital care

▶ Improving service design through the use of informatics

▶ Service design for quality improvement

▶ Improving service delivery through use of technology

▶ Cost-effective service design

After you graduate

Healthcare is a dynamic sector with ever increasing demands worldwide. There is a constant need for experts with the knowledge, skills and expertise to manage and drive innovation, implement change and improve quality and efficiency in healthcare services.

As a graduate of HOM, you will have a broad range of career opportunities open to you within managerial or organisational leadership roles. With additional experience, you would expect to progress into a key executive role in the healthcare sector, which would involve leading and overseeing programmes, service transformation and policy.

Institute of Digital Healthcare

"Everything we learn on the course is applied to the challenges facing healthcare organisations today, and we use that knowledge to formulate real-world solutions. This is relevant and important for hospitals, as improvements would lead to higher quality outcomes. The skills I've gained at WMG have laid the perfect foundation for my future career in healthcare management. I'm confident that I can bring what I've learned on this course to a hospital team and help improve their outcomes."

Camilla Dobinson, UK
HOM student 2016-17

Key facts

Entry requirements:
British Second Class Honours degree or overseas equivalent in a variety of disciplines within Sciences Engineering, and Business.

Language requirement:
(applies to non-native English speakers)
IELTS: 6.5
PTE: 62
TOEFL iBT: 92

Study programme:
Taught modules – assessed by:
▶ Post-module assignments (3,000 – 5,000 words each)

Research project – assessed by:
▶ 15,000 word dissertation
▶ Oral exam

Core modules: x 8
▶ Leading Change in Healthcare
▶ Quality and Productivity in Health Service Systems
▶ Operational Management and Clinical Systems Improvement
▶ Introduction to Health Informatics
▶ Electronic Healthcare Records
▶ Epidemiology and Statistical Methods for Quality Improvement
▶ Introduction to Health Economics
▶ Resource Management in Healthcare Service Delivery

Course duration:
12 months duration
Start date: 30th September 2019

Tuition fees:
UK/EU: £14,115
Overseas: £25,870
Scholarships available

Applications:
warwick.ac.uk/wmgmasters/entry

Contact:
wmgmasters@warwick.ac.uk

MSc Cyber Security and Management (CSM)

MSc Cyber Security Engineering (CSE)

Who is the course designed for?

CSM is designed for graduates looking to understand or apply cyber security in a consultancy, strategic, business or management context. It is ideally suited to those from a computer science or IT background; the programme also caters for non-STEM graduates with a specific interest in cyber security.

What will the course provide?

Over the course of the year, you'll develop a clear understanding of the cyber threat landscape and how a cyber incident may evolve. You will cover the key technologies required to defend and protect organisational information infrastructures from threats and attacks, and will learn how to manage and limit the impact an attack can have on a business.

This MSc focuses on the strategic deployment and implementation of cyber security within an organisation. Our aim is to develop strategic thinkers who understand the threat, can manage resources, implement solutions, and can effectively communicate these to senior decision makers in order to support the strategic growth of a business.

Alongside core cyber modules, you'll have the opportunity to study technical cyber security modules or business and management modules, so that you can tailor your course to suit your career.

For the current academic year (2018/19), the course comprises nine 10-credit modules and a 90-credit dissertation. For 2019 entry, new modules may be added and the structure altered accordingly. For the latest information, please review: warwick.ac.uk/wmgmasters/courses/csm

Core modules:

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

Elective modules

▶ Globalisation and Outsourcing
▶ Financial Analysis and Control Systems
▶ Organisations, People and Performance
▶ Leadership
▶ Cyber Security for Virtualisation Systems
▶ Cyber Intelligence and Operations
▶ Cyber-Physical Systems
▶ Enterprise Cyber Security

Who is the course designed for?

CSE is designed for Computer Science, Informatics, IT or other STEM graduates, looking to become a cyber security professional, or take a leading technical role in an organisation critically dependent upon data and information communication.

What will this course provide?

Cyber security is not simply about protecting the internet. As our world becomes ever more dependent upon digital systems, our vehicles, infrastructure, industrial controls, finances, and medical devices all exist within the cyber domain. Studying Cyber Security with us will deepen your cyberspace knowledge, so you'll understand the nature of this evolving cyber environment, and how to protect and enhance the human experience within it.

This MSc focuses on the technical aspects of cyber security and how these may be implemented in a multidisciplinary way. Throughout the course the practical applications of topics are emphasised, as well as developing your abstract and analytical skills.

Through studying Cyber Security at Warwick, you will gain unparalleled exposure to industry. All taught modules contain valuable input from industry experts who, through case studies and guest lectures, contribute to the design and delivery of material and make for a very rich learning environment.

CSE comprises eight compulsory 15-credit taught modules and a 60-credit dissertation. For 2018 entry, additional modules may be added. For the latest information, please review: warwick.ac.uk/wmgmasters/courses/cse

Core modules:

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

CSE is provisionally certified by the National Cyber Security Centre (part of GCHQ)

CSM has a pathway certified by the National Cyber Security Centre (part of GCHQ)

"Everything I do in my job now relates to what I learned at WMG. The course is perfectly designed to prepare people for a working environment. For each module, there's an intensive week of learning that provides a wealth of information. Then through the PMA, I was able to research the subject in more depth and present my findings. I am putting all these skills and knowledge into use on a daily basis, and it has made a huge difference in my ability to perform well in my role!"

Rebecca Falconer, UK
CSM graduate 2015-16
Senior Cyber Security Consultant, Capgemini

Key facts

Entry requirements:
British Second Class Honours degree or overseas equivalent in a variety of disciplines including Engineering, Science, Business.

Language requirement:
(applies to non-native English speakers)
IELTS: 6.5
PTE: 62
TOEFL iBT: 92

Study programme:
Taught modules – assessed by:
▶ Post-module assignments (3,000 – 4,000 words each)
▶ In-module assessment (for some modules)

Research project – assessed by:
▶ 20,000 word dissertation
▶ Oral examination

Core modules:
▶ See page 28

Elective modules: x 4 for CSM only
Four to be chosen from the website

For CSM, the GCHQ certified pathway may require you to select specific elective modules

Course duration:
12 months duration
Start date: 30th September 2019

Tuition fees:
UK/EU: £14,115
Overseas: £25,870
Scholarships available

Applications:
warwick.ac.uk/wmgmasters/entry

Contact:
wmgmasters@warwick.ac.uk

IET Accredited Programme
The Institution of Engineering and Technology

These courses are accredited by the Institution of Engineering and Technology.

MSc Manufacturing Systems Engineering and Management (MSEM)

As products become increasingly complex, so do the manufacturing systems required to produce them. MSEM is about designing and managing the most efficient means of production, in order to make the best products.

Who is the course designed for?

MSEM is designed for engineering graduates interested in manufacturing systems and operations management. The course is suitable for engineers already working in industry and wanting to make the transition to engineering manager, and for recent graduates looking to fast-track their career in order to take a leading role within the manufacturing sector. Approximately 50% of students have work experience before joining this programme. Whilst this is beneficial, it is not essential and we are pleased to accept highly motivated recent graduates.

The course attracts students from across the world – currently 75 nationalities are represented in the department. We usually take a single cohort of up to 30 students on this Master's stream, making it a very close knit group.

What will the course provide?

This course combines value creation with strategic development in a manufacturing environment, providing you with the latest manufacturing techniques and processes. We work at the forefront of emerging technologies, and through collaborative R&D with industry partners we drive the transfer of knowledge into new areas. As an MSEM student, you will benefit from much of the dynamic research carried out in the areas of advanced materials and processes, additive layer manufacturing, automation and robotics, machining technology, and digital manufacturing.

You will develop an understanding of the concepts of manufacturing engineering systems and the skills to analyse, design, and implement these systems in practice. You will also gain an understanding of strategic and operational management and learn how to apply technology, quality tools, and specific techniques in order to improve operations.

Throughout the year, you will be introduced to state-of-the-art manufacturing processes, technology, and materials in our world class Engineering Hall and International Institute for Nanocomposites Manufacturing.

Your project

Your project is worth 50% of your final grade and supports you in developing your personal research skills. For MSEM students, this should be centred around manufacturing systems or manufacturing technologies and their management. Projects will often focus on manufacturing processes, process planning and improvement, or machining and machine tools.

Some examples of recent projects include:

▶ Novel techniques for high performance lightweight engine manufacture
▶ Manufacturing process improvement using Lean and/or Six Sigma methods
▶ Simulation and optimisation of production systems: collaborative project with Jaguar Land Rover and suppliers
▶ Digital modelling of factory work cells for performance assessment
▶ Dynamic generation of human-machine interface for automation systems

After you graduate

As a graduate of MSEM, you can expect to be employed as a leader in general or manufacturing engineering management.

Graduates from this course have gone on to work for a range of UK and internationally based manufacturing companies within various sectors. Positions include Manufacturing Manager, Lead Engineer, General Operations Manager, Production Engineer, Site Manufacturing Improvement Manager, Materials Planner, Manufacturing Operations Engineer, and Project Manager.

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

IET Accredited Programme
The Institution of Engineering and Technology

"For me, this course was an incredible experience – to study in a world class institution with such impressive R&D facilities is off the scale of what I expected. I greatly improved my knowledge and understanding of manufacturing systems both in terms of manufacturing technologies and operations management. There was a very good balance between the academic, the practical and the research elements. It has taught me a new way to approach problems and find solutions."

Sibi Maran, India,
MSEM graduate 2015-16

Key facts

Entry requirements:
British Second Class Honours degree or overseas equivalent in Engineering.

Language requirement:
(applies to non-native English speakers)
IELTS: 6.5
PTE: 62
TOEFL iBT: 92

Study programme:
Taught modules – assessed by:
▶ Post-module assignments (3,000 – 4,000 words each)
▶ In-module assessment (additional for some modules)

Research project – assessed by:
▶ 20,000 word dissertation
▶ Oral examination

Core modules: x 8
▶ Industrial Engineering
▶ Manufacturing Process Technology
▶ Operations Strategy for Industry
▶ Quality, Reliability and Maintenance
▶ Project Planning, Management and Control
▶ Logistics and Operations Management

Including two from:
▶ Automation and Robotics
▶ Machining Technology
▶ Advanced Materials and Processes
▶ The Virtual Factory
▶ Problem Solving with Statistics

Elective modules: x 1
One to be chosen from the full module list on website (subject to restrictions)

Course duration:
12 months duration
Start date: 30th September 2019

Tuition fees:
UK/EU: £14,115
Overseas: £25,870
Scholarships available

Applications:
warwick.ac.uk/wmgmasters/entry

Contact:
wmgmasters@warwick.ac.uk

MSc Sustainable Automotive Engineering (SAE)

Who is the course designed for?

SAE is designed for engineering or STEM subject graduates with an interest in automotive innovation. It is ideally suited to those aspiring to become research managers and technology leaders within the strategically important areas of vehicle electrification and sustainability.

What will the course provide?

This course will give you 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.

Throughout the year, you will gain a holistic understanding of the different technology options and methods for design, system integration, and verification that will drive the market introduction of new energy efficient vehicles. You will develop the skills to design and evaluate the next generation of automotive products that have a lower environmental impact than conventional vehicles. You will learn the latest innovations in research, technology management, and leadership that are pre-requisite for career progression within the international automotive industry.

Core modules:

▶ Automotive Hybridisation and Electrification
▶ Energy Storage and High Voltage Systems for HEV Applications
▶ Propulsion Technology for HEV Applications
▶ Lightweight Materials and Structures
▶ Systems Modelling and Simulation
▶ Programming and Fundamental Algorithms for Scientists and Engineers

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

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Your Project

Leveraging the close partnerships that WMG has with key organisations within the automotive supply chain, it is envisaged that your project will be closely aligned with overcoming a real-world problem in the areas of vehicle electrification and sustainability, or smart, connected and autonomous vehicles. Many of the projects will feed directly into larger research programmes and will require you to liaise directly with senior academics, researchers, and industry partners.

MSc Smart, Connected and Autonomous Vehicles (SCAV)

Who is the course designed for?

SCAV is designed for engineering or STEM subject graduates It is particularly suitable for those with a background in electronics, electrical engineering, control systems, or communications who want to play a role in the development of connected and autonomous vehicles, and the Intelligent Transportation Systems Network.

What will the course provide?

With the advent of smart, connected and autonomous vehicles on the horizon of technical advancements, the automotive industry is facing a developmental challenge. How do we develop a robust technical infrastructure to support the anticipated explosive growth in smart vehicular functions, communications systems and driverless cars? This demands a comprehensive understanding of the technology and a bottom-up approach ensuring robustness and dependability of Electronics, Communications (e.g. V-2-V, V-2-I) and Control Systems.

Through this MSc we aim to address the knowledge-gap in the areas of machine learning, automated control strategies, connectivity, and communication infrastructure, cybersecurity protocols, emerging automotive networks and robust automotive embedded systems within the context of smart, connected and autonomous vehicles.

Core modules:

▶ Automotive Sensor and Sensor Fusion
▶ Human-Technology Interaction
▶ Robust Automotive Embedded Systems
▶ Networks and Communications for the Connected Car
▶ Machine Intelligence and Data Science

Elective modules

The following modules are default elective modules scheduled for all SCAV students. If you prefer to change these, this can be done in discussion with course leader.

▶ Programming and Fundamental Algorithms for Scientists and Engineers
▶ Technology Management

"There were many different activities which kept the course very stimulating right the way through: workshops and practicals, for example, as well as guest lecturers from industry and research. I also really enjoy the collaborative nature of the course – working in small groups to solve problems and create solutions has really enhanced my learning experience. WMG's state-of-the-art facilities and automotive expertise are well known, and it's great to learn from, and be surrounded by, all of that."

Ben Silvester, UK
SAE student 2016-17

Key facts

Entry requirements:
British Second Class Honours degree or overseas equivalent in an engineering or STEM subject.

Language requirement:
(applies to non-native English speakers)

IELTS: 6.5
PTE: 62
TOEFL iBT: 92

Study programme:
Taught modules – assessed by:
▶ Post-module assignments (3,000 – 4,000 words each)
▶ In-module assessment (for some modules)

Research project – assessed by:
▶ 20,000 word dissertation
▶ Oral examination

Core modules:
▶ See page 32

Elective modules:
SAE - elective modules x 3
To be chosen from the full module list on website

SCAV - elective modules x2
See page 32 for details.

Course duration:
12 months duration
Start date: 30th September 2019

Tuition fees:
UK/EU: £14,115
Overseas: £25,870
Scholarships available

Applications:
warwick.ac.uk/wmgmasters/entry

Contact:
wmgmasters@warwick.ac.uk

How to apply

Once you have decided which MSc programme is right for you, you can begin preparing your application.

Applications must be made electronically via our website:
warwick.ac.uk/wmgmasters/entry

Entry requirements

In order to meet our academic entry requirements, you should have obtained the minimum of a good UK second-class honours degree (or equivalent), in a variety of disciplines, including: engineering, science, IT or business. There are some differences in the requirements for each course, so please refer to each course page to check your eligibility for your chosen programme.

What you will need to provide as part of your application

▸ A completed **application form** with a **£55 application fee**

▸ A **personal statement**, which must be included with the online application

▸ A scan of your **transcript**. If you are still studying, send us your transcripts to date. If you are made an offer, we will then require your original degree transcripts and certificate in hard copy format to clear your conditions

▸ **English test result** (if you are a non-native English speaker). This can be submitted after you have received an offer

▸ **One reference**. If you completed studies less than 2 years ago, this should be an academic reference. If you graduated more than 2 years ago, we will accept a professional reference

Timings and deadlines

We review applications on a rolling basis, so you should submit your application as soon as you're ready. The university's application deadline is at the end of July. However, please be advised that our courses will close once they have reached capacity; **we strongly recommend early application in order to avoid disappointment.**

Deposits

If you are offered a place to study on one of our courses in 2019, you will be required to pay a deposit by May 2019 to secure your place on the course.

The deposit is £1,500 for international fee payers and £750 for Home/EU fee payers.

Further information about deposits will be communicated to you after you receive an offer to one of our courses.

If you have any questions about your eligibility, or about the application process, please contact us:
wmgmasters@warwick.ac.uk

Scholarships

We will be awarding WMG Excellence Scholarships to offer holders across all of our MSc programmes, offering between 25%-50% tuition fee discount. Applications are judged on academic achievement, professional experience, reasons for study and vision for the future.

For further information on these scholarships, and other funding opportunities, please visit our website:
warwick.ac.uk/wmgmasters/entry/finance

Map labels: Glasgow, Edinburgh, Newcastle, Belfast, Dublin, Manchester, Liverpool, Nottingham, Birmingham, Coventry, Leamington Spa, Cardiff, London

WMG
THE UNIVERSITY OF WARWICK

Excellent transport and road links

▶ 1 hour to London by train
▶ Nearest airport: Birmingham International (approx. 20 minutes by car)
▶ Nearest train stations: Coventry or Canley (approx. 10-15 minutes by car)

Getting in touch

▶ warwick.ac.uk/wmgmasters
▶ wmgmasters@warwick.ac.uk
▶ +44 (0)24 7657 5994

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@wmgmasters

WMG Full-time MSc Course Office
International Manufacturing Centre
University of Warwick
Coventry
CV4 7AL
United Kingdom