



POSTGRADUATE PROSPECTUS 2024 ENTRY Almost 90% of research produced by the University of Strathclyde has been rated world-leading or internationally-excellent in the Research Excellence Framework (REF) 2021.

Take a look through our prospectus and visit www.strath.ac.uk for more information.

- m University of Strathclyde, Glasgow, G1 1XN
- www.strath.ac.uk
- +44 (0)141 548 2814
- pgenquiries@strath.ac.uk

# GONTENTS CONTENTS CONTENTS

THE PLACE OF USEFUL LEARNING	16 ——— JANUARY INTAKE		
OS ————————————————————————————————————	18 ———— HOME FROM HOME		
•8	20 — STUDENTS' UNION		
10 ————————————————————————————————————	22 ———————————————————————————————————		
GLASGOW	<b>24</b> ——— TRULY GLOBAL		
EXPLORE SCOTLAND	26 ———— THE HEART OF THE CITY		
#STRATHLIFE	28 - 201 ———————————————————————————————————		



The University of Strathclyde is a leading international technological university located in the heart of Glasgow – one of the UK's largest cities – and has a vibrant, international community with almost 30,000 students from over 140 countries.

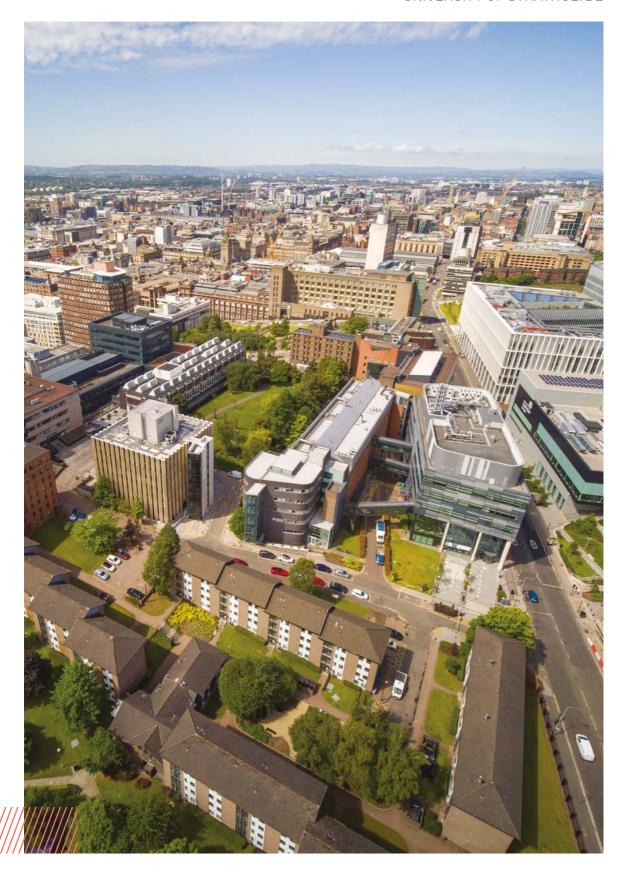
For more than 200 years Strathclyde has been delivering academic excellence through world-class research and teaching, providing students with flexible, innovative learning in preparation for their chosen career path.

# WEARE INVESTING INVOUR FUTURE



We are transforming our campus by investing £1 billion to create a first-class working and learning environment for you, our students.

Our £31 million sports centre, Strathclyde Sport, brings state of the art training, fitness and wellbeing facilities to the heart of the University's campus. Strathclyde students can enjoy our new £60 million Learning & Teaching building, which is located in the centre of the campus. Designed with students in mind, the hub includes leadingedge teaching facilities and a new home for student support services and the Students' Union.



# POSTGRADUATE POSTGRADUATE RESEARCH PhDPhD

Research is at the heart of what we do. We're looking for aspiring researchers to join our team and work side-by-side with world-renowned academics to help tackle challenges in areas of global importance and to support sustainable development goals.

Join the Strathclyde Doctoral School, a community of more than 1,800 doctoral researchers from over 80 countries, committed to enriching the student experience, intensifying research outputs and opportunities, and ensuring training is at the highest level. Researchers are fully equipped with knowledge to become future leaders in research, academia, business, industry, government, and social sectors.

There are two main routes to undertaking a research project at Strathclyde - either by applying for an existing project or pursuing your own specific areas of interest.

To find out about how to apply, funding your studies and our current research and doctorate opportunities, visit www.strath.ac.uk

I like the supportive environment and openness for new ideas and innovation that Strathclyde has to offer.

#### Linda Lapp

PhD: Healthcare Analytics, Computer & Information Sciences, Digital Health & Wellness Research Group



# GOMETO SCOTLANDS FIRST INNOVATION DISTRICT

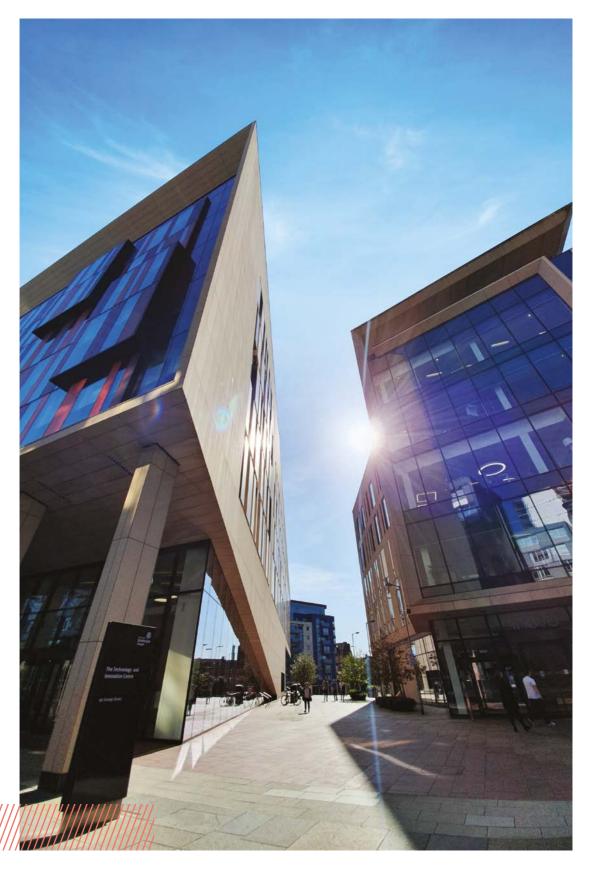
Glasgow City Innovation District is a hub for entrepreneurship, innovation, and collaboration. It builds on Scotland's rich tradition of scientific excellence and industrial collaboration.

Located in the heart of Glasgow City Centre, the District is home to many innovative companies and organisations who've located here to nurture and accelerate growth, improve productivity, and access world-class research and technology from the University.

With its world-class skills and talent base, excellent transport links, and reputation as a desirable city to 'live, work and play', Glasgow is the ideal place to create a thriving community of companies, researchers and innovation support organisations.

Visit www.glasgowcityinnovationdistrict.com













## GLASGOW

Scotland's largest city will be the backdrop to your studies, giving you instant access to world-class architecture and attractions, a diverse culinary scene, vibrant nightlife and outstanding shopping. Glasgow is easy to get around on foot or by bus, subway or train and has a wealth of culture to explore, from iconic museums to world-renowned festivals. The world's top travel guides have consistently named Glasgow as a mustvisit destination, and Rough Guide readers voted Glasgow the world's friendliest city — we couldn't agree more!

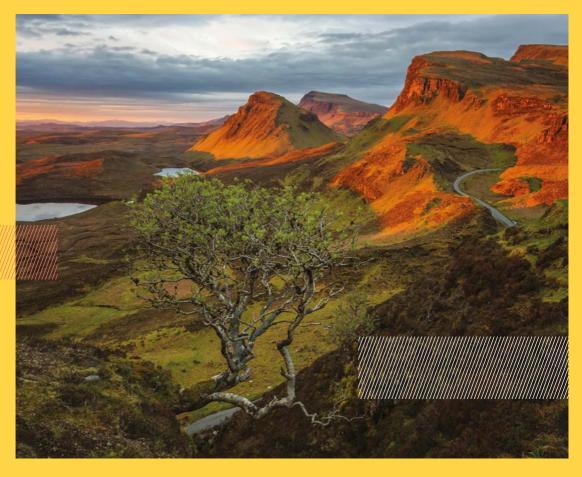
To find out more visit: www.peoplemakeglasgow.com

# EXPLORE SCOTLAND

Home to some of the most magnificent landscapes in the UK, and with Glasgow as a base, you are only a short journey from **exploring everything Scotland** has to offer.

Embark on adventures like hill walking, hiking, gold, mountain biking, snow, and water sports, all on your doorstep! Immerse yourself in Scotland's rich history with visits to historic castles and monuments, while enjoying our thriving arts and culture scene.

Find out more at www.visitscotland.com



- **d** unistrathclyde

- UniStrathclyde
- University of Strathclyde

















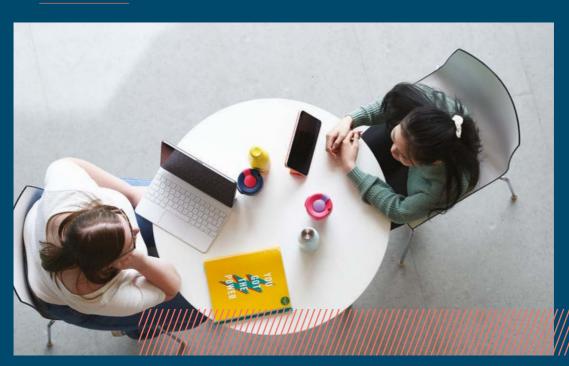


# JANUARY INTAKE ONE OF THE TOTAL OF THE TOTA

We're delighted to be able to offer a selection of our postgraduate taught and masters programmes with an additional entry point in January.

- Faculty of Engineering
- Faculty of Humanities & Social Sciences
- Faculty of Science
- Strathclyde Business School

Visit www.strath.ac.uk for details on courses available



### FACULTY OF ENGINEERING

For more information about our engineering courses, please email eng-admissions@strath.ac.uk.

- MSc Advanced Chemical Engineering
- MSc Advanced Construction Technologies & BIM
- MSc Advanced Mechanical Engineering
- MSc Advanced Mechanical Engineering with Aerospace
- MSc Advanced Mechanical Engineering with Energy Systems
- MSc Advanced Mechanical Engineering with Materials
- MSc Advanced Mechanical Engineering with Power Plant Technologies
- MSc Advanced Naval Architecture
- MSc Biomedical Engineering
- MSc Civil Engineering with specialist streams
- MSc Electronic & Electrical Engineering
- MSc Engineering Management for Process Excellence
- MSc Environmental Engineering
- MSc Machine Learning & Deep Learning
- MSc Marine Engineering
- MSc Mechatronics & Automation
- MSc Offshore Floating Systems
- MSc Renewable Energy & Decarbonisation Technologies
- MSc Satellite Data for Sustainable Development
- MSc Ship & Offshore Structures
- MSc Subsea & Pipeline Engineering
- MSc Supply Chain & Logistics Management
- MSc Supply Chain & Procurement Management
- MSc Supply Chain & Sustainability Management
- MSc Sustainability & Environmental Studies
- MSc Sustainable Engineering: Chemical Processing
- MSc Sustainable Engineering: Marine Technology
- MSc Sustainable Engineering: Offshore Renewable Energy
- MSc Technical Ship Management

#### **FACULTY OF SCIENCE**

For more information about our science courses, please email science-masters@strath.ac.uk.

- MSc Advanced Computer Science
- MSc Advanced Computer Science with Data Science
- MSc Advanced Software Engineering
- MSc Applied Statistics (online)
- MSc Applied Statistics with Data Science (online)
- MSc Applied Statistics in Finance (online)
- MSc Applied Statistics in Health Sciences (online)
- MRes Physics

# FACULTY OF HUMANITIES & SOCIAL SCIENCES

For more information about our humanities & social sciences courses, please email hass-pg-enquiries@strath.ac.uk.

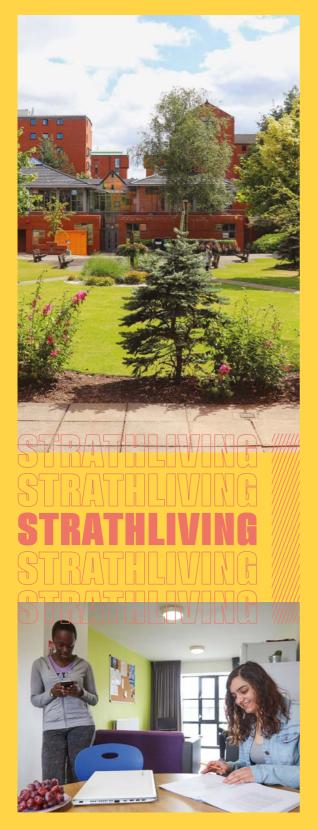
- LLM Construction Law
- LLM International Commercial Law
- LLM Professional Legal Practice
- MEd Education Studies (part-time)
- MLitt Media & Communication
- MSc Criminology & Social Policy
- MSc Education Studies
- MSc/PgDip/PgCert Genealogical, Palaeographic & Heraldic Studies
- MSc/PgDip/PgCert TESOL & Intercultural Communication
- MSc International Relations
- MSc Public Policy
- PgCert Children & Young People in Conflict with the Law
- PgCert Education (International)

#### STRATHCLYDE BUSINESS SCHOOL

For more information about our business courses, please email sbs.admissions@strath.ac.uk.

- MBA, full-time Glasgow
- MSc Business & Management
- MSc Business Analysis & Consulting
- · MSc Digital Marketing Management
- MSc Finance
- MSc International Accounting & Finance
- MSc International Management
- MSc Investment & Finance
- MSc Marketing

For more information on our January 2024 Intake programmes, please visit www.strath.ac.uk.







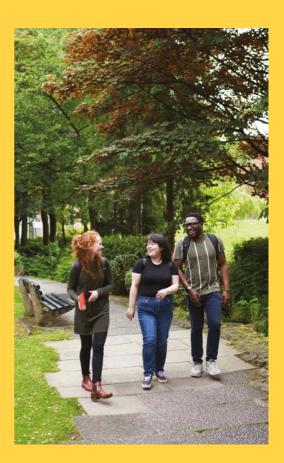
# HOMEHOME FROMEROM HOMEHOME

#### Make lifelong friends and feel at home in our student accommodation

Located on campus and only a short walk from the main University buildings, our Campus Village offers self-catered accommodation with a dedicated onsite management team and a night porter outside office hours. Weekly cleaning of communal areas in each flat is included in your rent, making your #strathliving experience even easier.

Our Campus Village includes an open study area, laundrette, and is situated close to the shops, restaurants, cafés, bars and other entertainment in the city centre and Merchant City.

Search 'accommodation' at <a href="www.strath.ac.uk">www.strath.ac.uk</a> to find out more.



# STUDENTS UNION

Your Students' Union promotes, represents and supports the interests and welfare of all our students, making sure your time at Strathclyde is the best it can be.

Every penny made goes into improving services for you. Whatever you choose to take part in at the Union, it will be the best decision you'll ever make at University!



#### CLUBS & SOCIETIES

We have over 200 clubs and societies for you to choose from, all offering you the opportunity to get involved in something you feel passionately about.

#### **STRATH SPORTS**

Strathclyde Sports Union proudly hosts over 50 sports clubs. Outdoor or indoor, competitive or recreational, everyone can have the chance take part in a way that suits them.

#### **OPPORTUNITIES**

Explore opportunities to develop skills alongside your course work and help others through volunteering.

#### **ADVICE & SUPPORT**

Our advice hub is here to advise and support all students for free, in full confidentiality. Ask them anything - no matter how big or small.

#### STUDENT VOICE

At Strathclyde, great value is placed on ensuring the student voice is heard. Your Union is led by student officers who are elected by you to represent all aspects of University life.

#### **REPRESENTATION**

We believe in a democracy shaped by the student voice - this is why we encourage everyone to become a Student Rep and be part of University discussions.

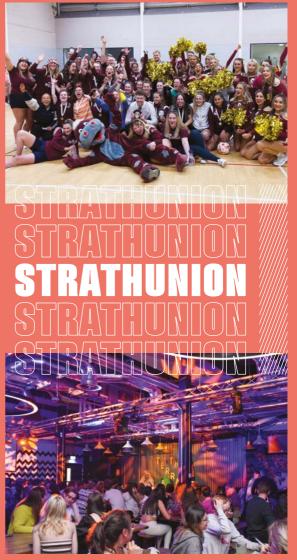
Visit www.strathunion.com to find out more.











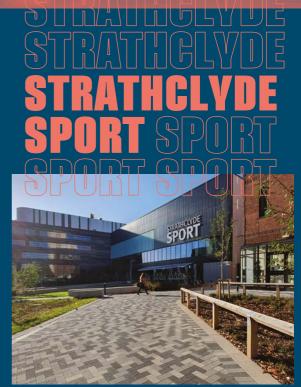
©Strathclyde Students' Union



"I can't recommend
Strathclyde enough! I've been
given great opportunities
that I otherwise wouldn't
have come across and found
a career route I'm extremely
passionate about, while
being allowed to combine my
training throughout it all."

#### **Mhairi Patience**

Former High Performance Sport Programme member with a First Class Honours degree in Sport & Physical Activity, and awarded the Outstanding 4th Year Student prize. Mhairi's accolades include British Universities 400m Hurdles Champion and winner of a bronze medal at the England Athletics (UK) U23 Championships.



## STRATHCLYDE STRATHCLYDE SPORTSPORT SPORTSPORT

#### Our £31 million Strathclyde Sport building provides a range of sport and wellbeing facilities for students, staff and the local community.

The centre offers state-of-the art training facilities, including a 25-metre swimming pool, fitness suite with capacity for over 180 people, sports halls, squash courts, dance studio and treatment rooms.

The Strathclyde Sport facility has already attracted partnerships with Netball Scotland, including the University's sponsorship of the Strathclyde Sirens netball team, and Glasgow Warriors Rugby Union Club.

We offer a number of performance sport scholarships to enable talented student-athletes to achieve their degree, whilst simultaneously reaching their sporting potential.

Whether you are an elite athlete or a complete beginner, we have opportunities here for all.

Search 'Strathclyde Sport' at www.strath.ac.uk

#### SPORTS SCHOLARS

## At the University of Strathclyde, we are committed to supporting promising sports scholars.

If you are an athlete who competes at a national or international level in your sport, we will consider this when assessing your application for study.

Our Admissions Team will use this information to consider making you an offer of admission, which takes your sports performance into account. This may be up to two grades lower than the typical offer for the degree you have applied to study.

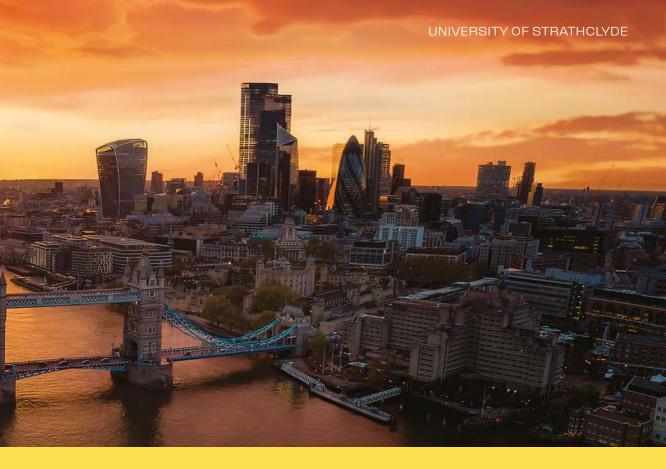
We would normally expect you to represent the University in your sport if offered admission under the scheme. Potential applicants with queries regarding their eligibility, or those who wish to be considered under this scheme, should contact the Performance Sport Manager Dave Sykes: dave.sykes@strath.ac.uk, in the first instance.





# GLOBAL

Only a one-hour flight from London, Glasgow is a gateway to explore the UK, Europe and beyond.



Approximately flight times:

AMSTE	RDAM	(//////////////////////////////////////	·/////////////////////////////////////	1HR	<b>25</b> mins
PARIS			•	lHR	50mins
BERLIN			2	HRS	<b>15</b> mins
MILAN			<b>2</b> 1	HRS	30mins
BARCE	LONA		<b>2</b> 1	HRS	<b>45</b> mins
BUDAF	PEST ///		<b>2</b> 1	HRS	55mins
DUBRO	OVNIK //		3	HRS	<b>15</b> mins
DUBAI				HRS	<b>15</b> mins

# THE HEART OF THE CITY

In the heart of the city, our campus is a short walk from two mainline railway stations, the bus station and the subway to help you get around the city and to visit the rest of the UK.

"People make Glasgow" is the motto of the city and it's totally right. People in Glasgow are extremely friendly and welcoming. It felt like my second home right away. Strathclyde was exactly the same."

#### **Athina Tatsi**

Studying MSc in Digital Health Systems, from Greece



# THE WAR THE STANCE OF WAR THE BING.

### We are internationally renowned for our research, teaching quality and strong links with industry.

We provide high-quality advanced training, with an unrivalled portfolio of almost 70 innovative, industrially-focused postgraduate taught courses, and leading research programmes. Many of our postgraduate taught courses are also available with a January entry point, providing flexibility for students starting their studies.

We are one of the largest, best equipped engineering faculties in the UK and the largest in Scotland. Multimillion-pound investment in our facilities gives students access to state-of-the-art equipment and work space in which to study.

Multimillion-pound investments by the research councils, government and industry, are testament to the quality and relevance of the Faculty's growing research portfolio. Our interdisciplinary research themes bring together expertise in Advanced Manufacturing & Materials, Energy, Health & Wellbeing, Innovation & Entrepreneurship, Measurement Science & Enabling Technologies, Ocean, Air & Space, and Society & Policy.

These integrated themes are underpinned by core strengths in areas such as telecommunication technologies, control systems, signal and image processing, non-destructive testing and enabling engineering.

In the Research Excellence Framework (REF) 2021, our Engineering submission, which included the research of seven departments from the Faculty, had the joint highest impact quality profile in Scotland and joint highest environment quality profile in Scotland, based on GPA as calculated by Times Higher Education (THE). Our Architecture, Built Environment and Planning submission was rated 100% 'outstanding' for impact and was the only submission in the unit to achieve this.

Our close connections with industry ensure that our degrees remain relevant to the needs of employers and provide students with opportunities to work in cross-disciplinary teams, solving real engineering problems.

Through our collaborative links with overseas partners, we have a growing international community of students, researchers and staff from around 100 countries.

#### Contact

Faculty Admissions Team
t: +44 (0)141 547 5484
e: eng-admissions@strath.ac.uk





### SUSTAINABLE ENGINEERING PROGRAMME

#### MSc

#### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Cross-disciplinary programme with input from industry Satisfy key requirements to attain Chartered Engineer status

Develop sought-after understanding of sustainable approaches and practices

#### 

- Instructional classes (including a Sustainability class taken by all students)
- Group project (on a topic related to environmental, social, or economic sustainability)
- Individual project

#### **Step One: Select Your Specialist Theme**

- Advanced Construction Technology and Building Information Management
- Offshore Renewable Energy
- Renewable Energy Systems and the Environment
- Chemical Processing
- Marine Technology

#### **Step Two: Select Generic Classes**

- · Design Management
- · Financial Engineering
- Project Management
- Risk Management
- Environmental Impact Assessment
- Knowledge and Information Management for Engineers

You will take at least two generic classes which meet employers' requirements for comprehensive engineering skills and satisfy key requirements to attain Chartered Engineer status.

#### **Step Three: Select Specialist Classes**

You also take up to five classes relevant to your selected specialist theme (see next page).

#### **Step Four: Complete a Group Project**

You work within a group of students from different specialist themes to produce sustainable solutions for real-life industry problems. Site visits, field trips and regular progress reports to industry partners are an integral part of the process.

You will develop valued skills in team-working, problemsolving, report writing and presentation.

#### Step Five: Complete an Individual Project

Students study a selected topic in depth and submit a thesis. Substantial industry input in the form of project ideas brings together engineering graduates and business representatives.

Successful completion of eight instructional modules, a group project and an individual project leads to the award of an MSc.

#### 

12 months full-time; 24 months part-time (minimum)

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant engineering, technology or science discipline. Entry may be possible with other qualifications provided there is evidence of relevant experience and of the capacity for postgraduate study.

#### SPECIALIST THEME CLASSES '//////

#### Advanced Construction Technology and Building Information Management (also available for January entry)

- · Building Information Management
- · Advanced Construction Technologies
- · Facilities Management
- Contract Administration and Practice

#### Offshore Renewable Energy (also available for January entry)

- Energy Resources and Policy
- · Electrical Power Systems
- Renewable Marine Energy Systems
- Finite Element Analysis of Floating Structures
- Physical Testing of Offshore Renewable Energy Devices

#### **Renewable Energy Systems and the Environment**

- Energy Resources and Policy
- Energy Systems Analysis
- · Electrical Power Systems
- · Energy Modelling and Monitoring

#### Chemical Processing (also available for January entry)

- Process Design Principles
- · Advanced Process Design
- · Petroleum Engineering
- · Clean Combustion Technologies
- · Safety Management Practices
- · Programming and Optimisation
- Environmental Engineering for Solving Industrial Challenges
- Electrochemical Energy Devices
- Molecular Simulation in Chemical Engineering

#### Marine Technology (also available for January entry)

- Maritime Safety and Risk
- Advanced Marine Structures
- Design and Construction of FPSOs
- Onboard Energy Management and Marine Environmental Protection
- Autonomous Marine Vehicles Modelling and Digital Twin

#### Contact

Faculty Admissions Team

**t:** +44 (0)141 574 5484

**e:** eng-admissions@strath.ac.uk

## ADVANCED ENGINEERING STUDIES

#### MSc/PgDip/PgCert by stand-alone modules (part-time distance learning)

#### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Flexible and modular framework offering a tailored study experience with the opportunity to explore blended, high quality, multidisciplinary learning across a broad spectrum of engineering disciplines

Ideal for students seeking professional development opportunities

Study stand-alone modules or transfer credits towards a PgCert, PgDip or MSc degree

#### 

Students should undertake an approved curriculum as follows:

- Postgraduate Certificate: no fewer than 60 credits
- Postgraduate Diploma: no fewer than 120 credits
- The degree of MSc: no fewer than 180 credits including a project

Students can select any classes taught by any Department within the Faculty of Engineering. Students who have accumulated at least 60 credits may, upon meeting specific course requirements, be transferred to any appropriate existing postgraduate programme and be considered for an award of MSc, PgDip or PgCert. This allows students to build their own curriculum bespoke to their interests. Your curriculum must be approved by the Programme Director.

Students can select to study any optional class across all eight engineering departments (with the exception of certain MSc projects and classes with clinical elements or pre-requisites).

Students who progress to the MSc, will be required to undertake an individual research project in their final year, the theme of which can be industry related or aligned to engineering research at the University.

#### 

MSc: Up to 60 months part-time distance learning PgDip: Up to 48 months part-time distance learning PgCert: Up to 24 months part-time distance learning Individual modules: 4-8 months

#### 

Normally a first-class or second-class honours degree (or international equivalent) in engineering or physical sciences, or equivalent professional qualification. A lower-class degree may be considered with relevant work experience. Consideration will be given to those from differing backgrounds based on their experience on a module by module basis.

# DEPARTMENT OF ARCHITECTURE

#### **RESEARCH DEGREES**

MRes, MPhil, PhD

#### **Contact for Research Degrees**

**t:** +44 (0)141 548 3248

e: contact-architecture@strath.ac.uk

#### **TAUGHT COURSES**

- Advanced Architectural Design
- · Architectural Design (International)
- Architectural Design for the Conservation of Built Heritage
- Urban Design
- Sustainable Engineering: Advanced Construction Technology and Building Information Management (part of Sustainable Engineering Programme, see page 30)

#### **Contact for Taught Courses**

**Faculty Admissions Team** 

**t:** +44 (0)141 574 5484

e: eng-admissions@strath.ac.uk

Our research in architecture reflects the multi- and transdisciplinary nature of architecture and urbanism and focuses on real-world problems and improving peoples' lives. We are leading the way to a more sustainable future in response to government, industry and societal needs and are at the forefront of research on how people and cities interact in a rapidly urbanising world.

In keeping with the University's strategic aims, we have developed strong links with industry, numerous European and international connections, and a capability to undertake trans-disciplinary research that integrates sustainable design, engineering and technology and cultural enquiry from local, regional, and global perspectives.

Research activities within the Department of Architecture are centred on two key areas:

- · Sustainability and the Built Environment
- · Urbanism and Global Cities

Our research groups continue to evolve, reflecting emerging issues in architectural design, cultural enquiry, sustainability and urbanism.

#### **Research clusters and units**

 Our competence manifests in the international reputation of our research leaders within our key research areas.

#### **Architectural Design & Conservation**

 We deal with the challenges of properly conserving our built heritage while allowing changes to adapt it to contemporary uses. We deal with the design of new buildings which contribute to the conservation of our environment, learning from traditional strategies and technological innovations.

#### **Construction Law**

 We actively engage in research related to the legalities of the construction process including dispute resolution, regulatory enforcement, professional ethics and corporate corruption.

#### Architecture & Urbanism in the Global South

 Our research encompasses the themes of knowledge economy and sustainable urban qualities in Global South cities, socio-spatial practice of migrant and minority communities, cultural identity and architectural design pedagogy.

#### **Design & Sustainability**

 We draw together research expertise in sustainable architecture and urbanism; the identification of social ecologies and environmental systems for supporting building performance, indoor environmental quality, resilient communities, innovations in solar design technology and improvements in health for sustainable development.

#### **Digital Construction**

 We evaluate and develop advanced technologies, methodologies and approaches for cutting-edge Information and Communication Technologies (ICT) to improve the performance of the construction industry.

#### **Urban Design**

 We study cities, their form, functions and impact, with the goal of making them more resilient. We aim to understand the major interrelated dynamics posed by recent urbanisation processes, in both informal settlements and established cities.

#### ENTRY REQUIREMENTS FOR RESEARCH DEGREES

First- or upper second-class honours degree, or equivalent overseas qualification, in any discipline.

### 

MArch/PgDip (ARB and RIBA Part 2 Course)

#### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Option to convert Diploma into MArch

ARB/RIBA Part 2 exemption

Develop critical, formal and technical architectural skills

Benefit from our fully-networked department facilities including design studios, workshop and information resource centre

#### 

The course reviews current theoretical approaches to architectural and urban design, assessing and exemplifying their relevance in existing and proposed contexts. You will:

- Undertake a comprehensive architectural and/or urban design project
- Demonstrate awareness of management procedures relevant to design practice
- Carry out research and critical analysis of a topic to produce a dissertation
- Carry out a detailed examination and resolution of an issue or issues of particular architectural and/or urban significance

The course comprises studio design work, lectures, a dissertation, special projects and workshops. Taught classes are under the broad topics of Culture and the City, Society, Environment and Technology and include cultural studies, professional studies and a range of optional classes which can cover; sustainability, environmental assessment, culture and behaviour, the history and theory of urbanism, international workshop, mentoring and conservation and building information management.

#### 

MSc: 24 months full-time PgDip: 21 months full-time

Students entering Year 2 of the programme:

MArch: 12 months full-time PgDip: 9 months full-time

#### 

Normally a first-class or second-class honours degree in architecture from a UK, EU or international university.

An academic portfolio containing all relevant design work from your previous course of study, and a personal statement detailing motivation, skills and suitability for admission are required.

### ARCHITECTURAL DESIGN (INTERNATIONAL)

MArch/PgDip (RIBA Part 2 Course)

#### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop skills in advanced design, analysis and critique

Meets RIBA Part 2 educational criteria

Two-year course for international students

Validated & recognised by LAM/PAM Lembaga Arkitek Malaysia/Board of Architects Malaysia

Develop projects related to your own interests in contemporary architecture

#### 

This two-year course is for international students. It runs parallel to the MArch/PgDip in Advanced Architectural Design and shares the same curriculum.

The first year is divided equally between the design studio and a set of taught classes including Architecture and the City and an elective option which provides the opportunity to study several of the UN Sustainable Development Goals. The studio projects are designed to develop the ability to deliver a considerable degree of architectural resolution and technical competence. In Architecture and the City, students develop academic and intellectual rigour in an area of personal study related to aspects of our built environment, which can be the foundation for further work in the second year.

Year 2 is centred on a series of design workshops, studios and taught classes designed to engage with a particular architectural, environmental and cultural theme set for the year. This requires students to take a stance on contemporary architectural issues and through this medium pursue an agenda that reflects their own interests and creative ambitions. Taught classes are under the broad topics of; Culture and the City, Society, Environment and Technology and include cultural studies, professional studies and a range of optional classes. These can cover; sustainability, environmental assessment, culture and behaviour, the history and theory of urbanism, international workshop, mentoring and conservation and building information management. Studies are predominantly project-based and demand a high level of design ability.

#### 

MSc: 24 months full-time PgDip: 21 months full-time

#### 

Normally a first-class or second-class honours degree in architecture.

An academic portfolio containing all relevant design work from your previous course of study, and a personal statement detailing motivation, skills and suitability for admission are required.

#### 

#### MSc

#### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Fully recognised by the Institute of Historic Building Conservation (IHBC)

Design-orientated and research-based course

Benefit from teaching and supervision by leading local and international experts

Gain the necessary knowledge, skills and experience to produce an architectural conservation and design project with real clients and advisors from local and central governments, industry and charities

#### 

#### **Compulsory Classes**

- Theory of Conservation
- · Architectural and Construction History
- · Legislation and Regulations
- Survey, Preliminary Studies and Investigations in Architectural Heritage
- Materials and Decay
- Structural Repairs and Strengthening
- · Conservation Materials Technology
- · Conservation Design Project
- · Dissertation Project

#### **Optional Classes**

- Urban Design History
- Sustainability
- · Building Information Management
- Urban Landscape Design

#### 

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in architecture, structural or civil engineering. Consideration will also be given to candidates with other relevant professional qualifications in a discipline related to the built environment and/or professional experience.

Examples of design work from your previous course of study, and a personal statement detailing motivation, skills and suitability for admission are required.

### 

#### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

The course is based on the Urban Design Studies Unit's cutting-edge research in design, urban analytics, morphology and theory

You will study theories and approaches to the design and management of the city, with a particular focus on the UDSU's approach called 'Masterplanning for Change' and apply this later in response to current and predicted urban change

By the end of the course, you will have the skills to design the 'resilient city' and in particular you will be able to: appreciate its complexity, develop long term strategies for its development and design in detail portions of such city, paying attention to the experience of its users and residents

You will work in a multidisciplinary, international and design-centred learning environment where ideas and theories will be tested through design, via live commissions with clients

#### 

#### **Compulsory Classes**

- Studio (Analysis, Strategy, Framework and Coding, Masterplanning and Place Design)
- Urban Design History
- Urban Theory
- Sustainability
- Urban Landscape Design
- Dissertation Project (MSc students only)

#### **Optional Classes**

- Urban Design Representation
- Legislation and Regulations
- Project Management

#### 

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a discipline related to the built environment and the city (e.g. architecture, planning, engineering, and other built environment disciplines). Candidates with alternative professional experience may also be considered.

A personal statement detailing motivation, skills and suitability for admission is required.

# DEPARTMENT OF BIOMEDICAL ENGINEERING

#### **RESEARCH DEGREES**

MPhil, PhD (Biomedical Engineering) MRes Biofluid Mechanics MRes Biomedical Engineering

#### **Contact for Research Degrees**

t: +44 (0)141 548 3108

e: biomedeng-pg-admissions@strath.ac.uk

#### **TAUGHT COURSES**

- Biomedical Engineering (with optional specialist streams)
- · Prosthetics and Orthotics
- Rehabilitation Studies in Prosthetics and/or Orthotics

#### **Contact for Taught Courses**

**Faculty Admissions Team** 

**t:** +44 (0)141 574 5848

e: eng-admissions@strath.ac.uk

The Department of Biomedical Engineering provides high-quality research and postgraduate training in bioengineering that gives our graduates the skills and knowledge to provide unique and innovative technological solutions to modern-day health problems. As a centre of excellence for prosthetics and orthotics, we also provide courses specifically tailored for advanced education for professionals.

External research is supported by funding from the research councils, the Scottish Government, charities, commerce and industry within the UK and internationally in countries such as the US and Japan.

Biomedical Engineering takes a multidisciplinary approach to solving problems in medicine and biology, based on the application of advances in science, engineering and technology. A major focus is to improve the quality of life of people with medical conditions that restrict independent living and integration within the community. The Department is a key centre for the development of research projects in biomedical engineering and in the development and testing of medical devices.

#### **Research Groups**

#### **Rehabilitation Engineering**

Rehabilitation Engineering applies scientific and engineering principles to research related to the musculo-skeletal system. The main areas of research within the group are Biomechanics and Medical Robotics, Prosthetics and Orthotics, and Motor Control and Neuroprosthetics.

#### **Medical Devices and Diagnostics**

Research activities range from minimally-invasive patient monitoring or rapid point of care (POC) diagnosis to the development of new innovative interventional technologies including heart valves, life support systems and implantable cardiovascular devices. The main areas of research are:

- Minimally-Invasive Diagnostics
- Sensors for Cell and Tissue Engineering/ Implanted Devices
- POC Patient Monitors

#### **Cell, Tissue and Organ Engineering**

Research within the group looks at cellular interactions, cell and tissue engineering and the development of artificial organs. The main areas of research are:

- Cellular Interactions with Material/Chemicals
- Cell/Tissue Engineering
- Hybrid Artificial Organs
- · Modelling of Artificial Organs
- Microbial Decontamination and Sterilisation

#### **National Centre for Prosthetics and Orthotics**

The National Centre for Prosthetics and Orthotics (NCPO) has a wide network of collaborative links with departments across the Faculty of Engineering and the Faculty of Humanities & Social Sciences, and also with clinical and research facilities across the UK and overseas. Our purpose-built facilities include fully-equipped workshops and clinic rooms.

Within the Department of Biomedical Engineering, NCPO has an active and expanding research portfolio of fundamental and applied research projects. Research activities are grouped under the following main themes:

- Clinical Activities
- Development and Evaluation of Clinical Techniques
- Evaluation of Prosthetic and Orthotic Interventions
- Development and Evaluation of Outcome Measures
- · Quality of Life Products
- Clinical Evaluation Tools
- Components
- Technologies
- Clinical Simulation for Prescription
- Shape Capture



#### BIOFLUID ///// MECHANICS

#### **MRes**

#### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Learn to apply engineering, mathematical and physical principles of fluids to problems in biology and medicine

Opportunity to focus on multidisciplinary research throughout the course

Benefit from visiting speakers from industry

#### 

#### **Compulsory Classes**

- Professional Studies in Biomedical Engineering
- Research Methodology
- Project

#### **Optional Classes (minimum of two)**

- Biofluid Mechanics
- Industrial Software
- Medical Science for Engineering
- Haemodynamics for Engineers
- Numerical Modelling in Biomedical Engineering
- Cardiovascular Devices
- The Medical Device Regulatory Process
- Entrepreneurship and Commercialisation in Biomedical Engineering
- · Introduction to Biomechanics
- Finite Element Methods for Boundary Value Problems and Approximation
- Mathematical Biology and Marine Population Modelling
- Design Management
- Risk Management

#### **Research Project**

Students also undertake a research/development project, chosen from a pool of relevant industrial or clinical projects, and submit a thesis.

#### 

12 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in engineering, physical science, or mathematics.

# BIOMEDICAL ///////////ENGINEERING

#### **MRes**

#### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Conversion course for graduates interested in developing a research career

Benefit from our collaborative clinically-driven research output, training and knowledge transfer

Undertake a research/development project

#### 

#### **Compulsory Classes**

- Engineering Science OR Medical Science
- Professional Studies in Bioengineering
- Research Methodology

#### **Optional Classes (minimum of two)**

- Biomedical Electronics
- Biomedical Instrumentation
- Introduction to Biomechanics
- Clinical and Sports Biomechanics
- · Tissue Mechanics
- · Biomaterials and Biocompatibility
- Regenerative Medicine and Tissue Engineering
- Cardiovascular Devices
- · Prosthetics and Orthotics
- Haemodynamics for Engineers
- Numerical Modelling in Biomedical Engineering
- Medical Robotics

#### **Research Project**

Students also undertake a research/development project, chosen from a pool of relevant industrial or clinical projects, and submit a thesis.

#### 

12 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in engineering, physical science, life science, medicine, or a profession allied to medicine.

Strathclyde has made me feel incredibly welcome, and I think this is because inclusion is made a priority. I have met students and staff from all over the world and really benefited from hearing many diverse perspectives.

**Dr Tony McGarry**Maisie Keogh, PhD Biomedical Engineering

January 2024 start date available.
Visit www.strath.ac.uk for full details.

# 

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Accredited by the Institute of Physics and Engineering in Medicine

Conversion course to help you develop a career in research, industry or the NHS

Contribute to solutions for clinically-relevant problems

#### 

Participants can graduate with an MSc in Biomedical Engineering or choose to follow one of two specialist streams which focus on either Biomechanics or Cell and Tissue Engineering.

#### **Compulsory Classes**

All students take the following compulsory classes, irrespective of stream

- Engineering Science OR Medical Science
- Professional Studies in Bioengineering
- Anatomy and Physiology (for students taking Engineering Science but who do not have the prerequisite background in Anatomy and Physiology)
- Biomedical Flectronics
- Biomedical Instrumentation
- Research Methodology

#### **MSc in Biomedical Engineering**

Six classes to be chosen from the list of optional classes. A research project must be undertaken in the general area of Biomedical Engineering

#### **MSc in Biomedical Engineering with Biomechanics**

- Introduction to Biomechanics
- Prosthetics and Orthotics
- · Clinical and Sports Biomechanics
- Three additional classes from the list of optional classes
- The research project must be undertaken in the field of Biomechanics

#### MSc in Biomedical Engineering with Cell and Tissue Engineering

- Regenerative Medicine and Tissue Engineering
- Biomaterials and Biocompatibility
- Tissue Mechanics
- Three additional classes from the list of optional classes
- The research project must be undertaken in the field of Cell and Tissue Engineering

#### **Optional Classes**

- Clinical and Sports Biomechanics
- Tissue Mechanics
- Introduction to Biomechanics
- Biomaterials and Biocompatibility
- Prosthetics and Orthotics
- Cardiovascular Devices
- Regenerative Medicine
- Haemodynamics for Engineers
- Numerical Modelling in Biomedical Engineering
- Medical Robotics
- The Medical Device Regulatory Process
- Rehabilitation Technology

#### 

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in engineering, physical science, life science, medicine, or a profession allied to medicine.

# PROSTHETICS AND ORTHOTICS

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Undertake a clinically-relevant project in the rehabilitation area of prosthetics and/or orthotics

Develop your career as a health professional

Experience laboratory demonstrations, practical exercises and clinical sessions

#### 

#### **Compulsory Classes**

- Engineering Science OR Medical Science
- · Professional Studies in Biomedical Engineering
- Research Methodology
- Disability and Societal Effects

#### **Optional Classes**

- · Introduction to Biomechanics
- Regenerative Medicine
- Tissue Mechanics
- · Clinical and Sports Biomechanics
- · Bio-signal Processing and Analysis
- Biomaterials and Biocompatibility
- The Medical Device Regulatory Process
- Cardiovascular Devices
- Orthotic Management of Neurological Condition
- Orthotic Management of Diabetes Mellitus
- Hip, Knee and Ankle Disarticulation
- Clinical Governance
- Orthotic Management of Spinal Deformity
- · Clinical Gait Analysis
- Upper Limb Prosthetics
- Lower Limb Prosthetic Design
- · Paediatric Lower Limb Prosthetics

#### **Research Project**

Students also undertake a research/development project.

#### 

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in prosthetics and orthotics.

# REHABILITATION STUDIES IN PROSTHETICS AND/OR ORTHOTICS

#### MSc/PgDip/PgCert

(part-time distance learning)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Suitable for professionals already working in prosthetics, orthotics, healthcare, medicine or associated disciplines

Study by distance learning at your own pace

Use your healthcare-focused research skills to plan and deliver a work-based research project

#### 

- Postgraduate Certificate three Optional and Restricted classes
- Postgraduate Diploma six from the list of Optional and Restricted classes
- MSc classes in Research Methodology and Data Analysis, research project and dissertation

#### **Optional Classes**

- Clinical Governance
- Orthotic Studies\*
- Prosthetic Studies\*
- Introductory Biomechanics
- Lower Limb Prosthetic Biomechanics
- · Lower Limb Orthotic Biomechanics
- Clinical Gait Analysis
- \* not available to Prosthetists or Orthotists

#### **Research Project**

(for professional Prosthetists/Orthotists)

- Advanced Prosthetic Science
- Advanced Orthotic Science

#### 

MSc: 36 months part-time PgDip: 24 months part-time PgCert: 12 months part-time

#### 

Normally a second-class Honours degree (or international equivalent) in a relevant medical degree, or an acceptable professional qualification.

The content of some courses may require a basic knowledge of trigonometry and the ability to handle simple algebraic equations.

# DEPARTMENT OF CHEMICAL AND PROCESS ENGINEERING

#### **RESEARCH DEGREES**

MPhil, PhD

#### **Contact for Research Degrees**

**t:** +44 (0)141 548 2399

e: chemeng-pg-admissions@strath.ac.uk

#### **TAUGHT COURSES**

Full-time courses

- Advanced Chemical Engineering
- Energy Systems Innovation
- Sustainable Engineering: Chemical Processing (see page 30)

#### **Contact for Taught Courses**

**Faculty Admissions Team** 

**t:** +44 (0)141 574 5484

e: eng-admissions@strath.ac.uk

Part-time Distance Learning

- Process Technology and Management
- Chemical Technology and Management
- Advanced Chemical and Process Engineering

#### Contact for Part-time Distance Learning

Faculty Admissions Team

**t:** +44 (0)141 548 2148

e: chemeng-online@strath.ac.uk

#### **Research Profile**

Research in the Department of Chemical and Process Engineering spans the boundaries of science and engineering. Our research applies advances in science and mathematics to develop solutions to challenges faced by industry and society, such as manufacturing medicines, delivering clean water and providing renewable energy. We research areas from controlled assembly of nanostructured materials to design of advanced reactors, and from combating global warming with novel energy storage and gas separation technology to understanding protein aggregation in degenerative diseases.

We have strong links with other engineering and science departments within Strathclyde and externally. We also work with many industrial partners.

#### **Research Themes**

Our cutting edge research aligns with the following University-wide strategic themes:

#### **Advanced Manufacturing & Materials**

We design, develop, and manufacture new nanostructured materials that can be used to address problems of global significance. We're working on solutions to energy generation and storage, water purification, carbon capture and pharmaceutical manufacture.

Our key areas of research include the manufacture and application of porous materials and metal-organic frameworks; the properties and processing of polymeric materials; the nucleation, growth and separation of crystals; the applications of electrochemistry to coatings, metal ion recovery, and water clean-up.

#### **Energy**

The development, well-being and progress of society is closely linked to the availability of energy. We're developing more effective methods for the extraction of conventional energy resources, as well as researching ways to make alternative energy sources, such as biomass, more economically competitive. In addition, we're actively developing novel chemical processes that more efficiently and more cleanly use current energy resources.

#### **Health & Wellbeing**

We're active innovators in pharmaceutical processing, monitoring technology, and process development. A number of our academics are research partners within the National Centre for Continuous Manufacturing and Crystallization (CMAC) which focuses on transitioning the pharmaceutical industry from batch to continuous operation. We've developed crystallisation and isolation process development workflows and offer training in their industrial application. Our modelling team has simulated molecules to understand and design new therapeutics.

# Measurement Science & Enabling Technologies

Optimisation of chemical processes often depends on the application of advanced measurement capabilities, leading to improved understanding and control.

Often there's a synergy between instrumentation developed for experimental work in laboratory systems and the application to industrial processes. Our research in this area covers an array of measurement techniques and industry sectors but a recurrent theme is its application to minimise pollution and reduce waste as well as making more efficient use of energy.

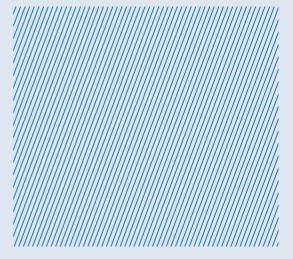
#### **Society & Policy**

Engineering and technology should benefit society and ensure its well-being. This is why much of our research is devoted to enabling sustainable development and minimising the impact of industry on the environment. We're also leveraging advances in social and behavioural sciences with our technical expertise and experience to incorporate human factors in improving methods of engineering education and in designing effective safety systems.

#### **Research Environment**

Our research students come from all over the world to participate in an active research programme. A number of studentships are available for well-qualified applicants. The Department oversees the operations of ARCHIE-WeSt, the University's regional supercomputer centre for research computing. It also has access to the Advanced Materials Research Laboratory and facilities of Continuous Manufacturing and Advanced Crystallisation (CMAC). In addition, departmental research and experimental facilities include:

- Differential Scanning Calorimetry (DSC),
   Thermogravimetric Analysis (TGA), Intelligent
   Gravimetric Analysis (IGA) and Brunauer, Emmett and
   Teller Instrument (BET) systems
- Electrochemical deposition and etching systems for nanofabrication
- High resolution optical microscopes with image analysis and digital cameras
- Hollow fibre and membrane gas testing equipment
- Rheometer and high pressure viscometer
- UV-Vis Spectrophotometers
- High-performance gas and liquid chromatograph
- Static and dynamic light scattering instruments
- High-power laser systems
- High-temperature furnaces



January 2024 start date available. Visit www.strath.ac.uk for full details.

# ADVANCED CHEMICAL ENGINEERING

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop your career in chemical and process industries

Meets accreditation requirements for the Institute of Chemical Engineers (IChemE)

Gain experience of best industry practice

#### 

- Design Principles
- Advanced Process Design
- · Petroleum Engineering
- Clean Combustion Technologies
- · Safety Management Practices
- · Programming and Optimisation
- · Project Scoping
- Molecular and Interfacial Science
- Electrochemical Energy Devices
- Molecular Simulation in Chemical Engineering

#### **Multidisciplinary Skills Classes**

- · Project Management
- Risk Management
- Environmental Assessment
- · Financial Engineering
- Knowledge and Information Management for Engineers

#### **Research Project**

All students undertake an individual research project working with our high-quality researchers on cutting-edge chemical engineering challenges.

#### 

12 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant engineering, technology or science discipline. Entry may be possible with other qualifications provided there is evidence of relevant experience and the ability to study at an advanced level.

# 

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Students are encouraged to carry out projects in an industrial environment

Aims to build capacity in energy innovation and support the development of new ideas and technologies in the energy sector by combining aspects of systems management, entrepreneurship and technical aspects of energy systems

#### 

- Petroleum Engineering
- Clean Combustion Technologies
- Electrochemical Energy Devices
- · Project Scoping

#### **Multidisciplinary Skills Classes**

- Energy Systems Analysis
- Systems Engineering Concepts
- Entrepreneurship, Innovation and Communications
- · Strategic Technology Management
- · Sustainable Product Design and Manufacture
- · Knowledge and Information Management
- Project Management
- · Risk Management
- Environmental Assessment
- · Financial Engineering

#### **Research Project**

All students undertake an individual research project working with our high-quality researchers on cutting-edge chemical engineering challenges.

#### 

12 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant engineering, technology or science discipline. Entry may be possible with other qualifications provided there is evidence of relevant experience and the ability to study at an advanced level.

# 

**MSc/PgDip/PgCert** (part-time distance learning)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Accredited by the Institution of Chemical Engineers (IChemE)

A project and work-based approach is supported by online tutorials in which students and tutors participate

Opportunity to choose classes to meet your own learning objectives

#### 

#### Year 1, Semester 1

- Process Design Principles
- · Process Analysis in Chemical Engineering

#### Year 1, Semester 2

- · Understanding Financial Information
- · Project Management
- · Advanced Process Design

# Year 2, Semester 1 typical options (three to be chosen)

- · Safety Management Practices
- · Programming and Optimisation
- · Molecular and Interfacial Science
- Petrochemical Engineering
- Molecular Simulation in Chemical Engineering
- Clean Combustion Technologies
- · Electrochemical Energy Devices

#### Semester 2

- IT Strategy
- Business and Technology Strategy
- · Ethics, Sustainability & Environmental Engineering

#### Year 3, Individual Project

You'll explore an advanced technical issue and a business case within your industrial workplace.

#### 

MSc: 36 months part-time PgDip: 24 months part-time PgCert: 12 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in chemical engineering or a relevant engineering, technology or science discipline. Entry may be possible with other qualifications provided there is evidence of relevant experience and the ability to study at an advanced level.

# 

#### MSc/PgDip/PgCert

(part-time distance learning)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Meets the management and technical development needs of those working in the chemical, pharmaceutical and process industries

Directed at people working as chemists in research and development, manufacturing and business management roles

#### 

#### Year 1

- · Analytical Techniques for Industry
- Multivariate Analysis and Process Analysis for Industry
- · Understanding Financial Information
- Project Management

#### Year 2. Semester 1 core class

· Process Design Principles

#### Year 2, Semester 1 typical optional classes (choose 2)

- Safety Management Practices
- · Programming and Optimisation
- Petroleum Engineering
- Molecular Simulation in Chemical Engineering
- Electrochemical Energy Devices
- Molecular and Interfacial Science
- Clean Combustion Technologies

#### Year 2, Semester 2 core classes

- Managing People
- Business and Technology Strategy
- Ethics, Sustainability & Environmental Engineering

#### Year 3, Individual Project

You'll explore an advanced technical issue and a business case within your industrial workplace.

#### 

MSc: 36 months part-time PgDip: 24 months part-time PgCert: 12 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in chemical engineering or a relevant engineering, technology or science discipline. Entry may be possible with other qualifications provided there is evidence of relevant experience and the ability to study at an advanced level.

# ADVANCED CHEMICAL AND PROCESS ENGINEERING /////

#### MSc/PgDip/PgCert

(part-time distance learning)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

A project and work-based approach is supported by online tutorials in which students and tutors participate

Opportunity to choose classes to meet your own learning objectives

Accredited by the Institution of Chemical Engineers (IChemE)

#### 

#### Year 1, Semester 1

- Process Design Principles
- Safety Management Practices
- · Programming and Optimisation

#### Year 1, Semester 2

- Project Management
- Advanced Process Design
- Ethics, Sustainability and Environment Engineering

#### Year 2

6 optional classes to be chosen in an approved plan based on Institution of Chemical Engineers (IChemE) breadth and depth (some typical options below)

- Molecular and Interfacial Science
- Petroleum Engineering
- Molecular Simulation in Chemical Engineering
- Clean Combustion Technologies
- Electrochemical Energy Devices
- Emerging Technologies
- Hvdralics
- Introduction to Open Source CFD
- · Understanding financial information
- Business and Technology Strategy

#### Year 3, Individual Project

You'll explore an advanced technical issue and a business case within your industrial workplace.

#### 

MSc: 36 months part-time PgDip: 24 months part-time PgCert: 12 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in chemical engineering or a relevant engineering, technology or science discipline. Entry may be possible with other qualifications provided there is evidence of relevant experience and the ability to study at an advanced level.

**E E** Chemical engineering is not the most straightforward course for studying, but here at Strathclyde, it was pretty delightful. For me, the labs have been the most exciting part of my studies here. I also think the **Chemical Engineering courses** are exceptional at Strathclyde because of the staff involved here and their high level of teaching and constant support.

**Aman Joshi** 

MSc Advanced Chemical Engineering

# DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

#### **RESEARCH DEGREES**

- · MPhil, PhD
- MRes Climate Change Adaptation
- · MRes Geoenvironmental Engineering
- MRes Integrated Pollution Prevention and Control

#### **Contact for Research Degrees**

**t:** +44 (0)141 548 2827

e: contact-civeng@strath.ac.uk

## TAUGHT COURSES

- Civil Engineering (with optional specialist streams)
- · Environmental Engineering
- Environmental Entrepreneurship
- Hydrogeology
- Sustainability and Environmental Studies

#### **Contact for Taught Courses**

**t:** +44 (0)141 574 5484

e: eng-admissions@strath.ac.uk

The Department of Civil and Environmental Engineering has a unique combination of multidisciplinary expertise, reflected in its portfolio of Masters courses, dynamic PhD programmes and internationally-renowned research. The Department combines the strengths of civil engineering, sustainability and environmental studies, providing the highest quality professional training, linking the built environment with the natural environment.

The Department holds an Athena SWAN gold award – the only engineering department in Scotland to hold a gold award and only one of four in the UK. The award recognises its "advancement of gender equality: representation, progression and success for all".

Our Department's research groups support a wide range of international research collaborations. In addition, research is underpinned by strong links with industry including high-profile visiting professors, an active industrial advisory board, seminar series with speakers from industry, and directly contributing to industrially relevant projects.

The Department offers opportunities for engaging with industry partners, including guest speakers, employability sessions and as part of the elective class Independent Study in Collaboration with Industry, all MSc and MRes students can apply to work on industry projects.

We have more than 70 registered postgraduate research students, with another 30 expected to complete their studies within the coming months. With currently more than 50% of our research student population being international, we strive to ensure an excellent student experience in an inclusive and supportive environment. As one of our PhD students put it, "it is lovely and nice being a PhD here and so are the friendships you can make".

#### **Research Areas**

Our researchers work across three main interdisciplinary centres:

# Centre for Ground Engineering & Energy Geosciences

The centre specialises in multidisciplinary research at the boundaries between biology, earth sciences and engineering. The Centre has a current research portfolio in excess of £4 million and leads a number of major multi-partner EPSRC and European Commission research projects. Researchers have expertise in a range of disciplines, including:

- Ground Barrier Technologies
- Experimental Geomechanics
- Geotechnical Engineering
- Geophysics
- Site Investigation
- Structural Geology
- Constitutive and Numerical Modelling of Geomaterials
- Hydrogeology
- Baseline Monitoring



# Centre for Water, Environment, Sustainability and Public Health

The Centre undertakes fundamental and applied research to provide novel solutions to some of the most pressing environmental challenges, working both locally and internationally. Areas of expertise include:

- Water
- · Public and Environmental Health
- Soil Contamination, Restoration and Remediation
- Environmental Assessment
- · Waste, Energy and Circular Economy
- International Development
- · Natural Hazards and Climate Change
- Circular Economy

#### **Centre for Intelligent Infrastructure**

The Centre is committed to transforming traditional structural engineering through cross-disciplinary research, recognising and transposing the recent radical innovations in material science, communication and sensor technology.

Researchers use techniques from chemistry, computer science, electronic engineering, physics, biochemistry and management science to solve societal problems surrounding the safety and resilience of structures that support energy generation, waste storage, transport and urban infrastructure.

Fundamental research is combined with industrial engagement, working across sectors such as construction, transportation, oil and gas, heritage buildings, renewables and nuclear, in collaboration with UK and EU government agencies and national laboratories. Research outputs include industrial patents and a spin-out company. Areas of expertise include:

- Intelligent Infrastructure and Artificial Intelligence
- Sensors and Automation
- Sustainable Construction Materials
- · Safety, Resilience and Economic Assessment
- Computational Modelling

### SCHOLARSHIP PROGRAMMES

# Research Scholarships PhD Studentships

Each year, the Department has a number of fully-funded PhD scholarships available to first-class applicants. Prospective students who hold (or expect to hold) the equivalent of a first-class Honours degree or an MSc with Distinction are encouraged to make an informal expression of interest between November and January.

<i>/////////////////////////////////////</i>	///////////////////////////////////////	///////////////////////////////////////	///////////////////////////////////////	///////////////////////////////////////

# MRES PROGRAMMES IN CIVIL AND ENVIRONMENTAL ENGINEERING

#### **MRes**

(full-time, part-time, or distance learning)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Tailor your studies to suit your research interests and/or career objectives

Design and undertake a supervised thesis project on a topic that interests you most

Contribute new knowledge at the frontiers of your discipline

Choose two elective classes from a range of postgraduate taught courses

Distance learning options available

#### 

Our MRes programmes combine one third taught component with two thirds independent research project. The taught component includes four compulsorily classes and two elective classes of your choosing. The research project is developed in partnership with the supervisor to suit your interests and ambitions. You will develop applied and multidisciplinary knowledge and skills.

#### **MRes Climate Change Adaptation**

The programme tackles a critical and growing topic for research and innovation. The course provides advanced study of key issues related to action to mitigate and adapt to climate change, and particularly around the circular economy, the design of engineering options for sustainable development, and infrastructure adaptation.

#### **Compulsory Classes**

- Circular Economy and Transformations Towards Sustainability
- Environmental Impact Assessment
- Qualitative And Quantitative Research Methods

#### **MRes Geoenvironmental Engineering**

The programme is unique in Scotland and the UK for being taught by a group of professionally-qualified civil engineers, chemists, microbiologists and geoscientists.

#### **Compulsory Classes**

- Contaminated Land
- Hydrogeology
- Qualitative And Quantitative Research Methods
- Site Investigation and Risk Assessment

#### **MRes Integrated Pollution Prevention and Control**

The programme provides advanced study of key issues related to environmental pollution, and opportunity to undertake research as the frontiers of this critical field.

#### **Compulsory Classes**

- Environmental Geochemistry
- Environmental Pollution Management
- Qualitative And Quantitative Research Methods
- Waste Management and Landfill Design

#### 

12 months full-time; 24 months part-time; 36 months online distance learning, offering students a flexible learning mode of study

#### 

Normally a first-class or second-class honours degree (or international equivalent) in an engineering, life science, earth science or another relevant discipline.

Experience of independent research is preferable.

January 2024 start date available.
Visit www.strath.ac.uk for full details.

# 

#### MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain specialist skills to lead future developments Choose to follow a specialist named stream Benefit from our purpose-built laboratory facilities Opportunity to carry out an industrial project

Accredited by ICE, IStructE, CIHT and IHE as meeting the requirements for Further Learning for a Chartered Engineer for candidates who have already acquired a partial CEng accredited undergraduate degree

#### 

Participants can graduate with an MSc in Civil Engineering or choose to follow one of three specialist streams which incorporate Civil Engineering and Project Management with Structural Engineering/Geotechnical Engineering/Geoenvironmental Engineering.

#### **Compulsory Classes**

All students take the compulsory classes: Group Design Project and Qualitative and Quantitative Research Methods. Those on the specialist streams (see below) also take the class Project Management, plus three compulsory classes, two optional classes from List A and three from List A or B.

#### **MSc in Civil Engineering**

Six classes from List A and three classes from List A or B

## MSc in Civil Engineering with Structural Engineering and Project Management

- Advanced Structural Analysis and Design
- · Ground Improvement and Reinforcement
- Pre-stressed Concrete, Composite Materials and Structural Stability
- Project Management

## MSc in Civil Engineering with Geotechnical Engineering and Project Management

- Geotechnics of Unsaturated Soils
- Ground Improvement and Reinforcement
- Hydrogeology
- Project Management

# MSc in Civil Engineering with Geotechnical Engineering and Project Management

- Contaminated Land
- Project Management
- Site Investigation and Risk Assessment
- · Waste Management and Landfill Design

#### **Optional Classes**

#### List A

- Advanced Structural Analysis and Design
- Building Information Management
- Contaminated Land
- Engineering Hydrology
- · Geotechnics of Unsaturated Soils
- Ground Improvement and Reinforcement
- Hydrogeology
- Pre-stressed Concrete, Composite Materials and Structural Stability
- · Project Management
- Renewable Energy Marine Systems
- · Site Investigation and Risk Assessment
- Structural Health Monitoring
- Waste Management and Landfill Design
- · Water and Environment Management
- · Water and Wastewater Treatment Design

#### **Optional Classes**

#### List B

- Circular Economy and Transformations Towards Sustainability
- Design Management
- Environmental Impact Assessment
- Environmental Pollution Management
- Financial Engineering
- Fundamentals of Environmental Forensics
- Geographical Information Systems
- Global Water Policy
- Independent Study in Collaboration with Industry
- Information Management
- Principles of Environmental Microbiology
- Public Health Studies
- · Risk Management

MSc students undertake a dissertation.

#### 

12 months full-time; 24 - 36 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in any civil engineering discipline. Applicants with a degree in environmental engineering, maths, physics and mechanical engineering may also be considered.

January 2024 start date available.
Visit www.strath.ac.uk for full details.

# 

MSc (full-time, part-time or distance learning)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop an interdisciplinary perception of environmental problems and the ability to work towards finding solutions

Study challenging real-world issues

Carry out an industrial project

Accredited by ICE, IStructE, CIHT and IHE as meeting the requirements for Further Learning for a Chartered Engineer for candidates who have already acquired a partial CEng accredited undergraduate degree

Distance learning options available

#### 

#### **Compulsory Classes**

- Environmental Geochemistry
- Principles of Environmental Microbiology
- Qualitative and Quantitative Research Methods
- · Site Investigation and Risk Assessment
- Waste Management and Landfill Design

#### **Optional Classes (seven to be chosen)**

- Circular Economy & Transformations Towards Sustainability
- Contaminated Land
- Engineering Hydrology
- Environmental Economics
- Environmental Impact Assessment
- Environmental Pollution Management
- · Financial Engineering
- · Fundamentals of Environmental Forensics
- Geographical Information Systems
- Global Water Policy
- Hydrogeology
- Independent Study in Collaboration with Industry
- Project Management
- Public Health Studies
- Water and Environmental Management
- · Water and Wastewater Treatment Design

MSc students undertake a dissertation.

#### 

12 months full-time; 24 - 36 months part-time (on-campus study); 36 months part-time distance learning, offering students a flexible learning mode of study

#### 

Normally a first-class or second-class honours degree (or international equivalent) in engineering, earth sciences, environmental management, or a background in the chemical, physical, biological or mathematical sciences.

# ENVIRONMENTAL /////ENTREPRENEURSHIP

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop skills to contribute to environmental improvement and circular economies

Learn how to identify business opportunities

Carry out a four-month project for a client

Suitable course for graduates of any background

Accredited by ICE, IStructE, CIHT and IHE as meeting the requirements for Further Learning for a Chartered Engineer for candidates who have already acquired a partial CEng accredited undergraduate degree

Distance learning options available

#### 

#### **Compulsory Classes**

- Client-Based Environmental Entrepreneurship in Practice
- Either Entrepreneurship, Innovation and Commercialisation OR New Venture Creation
- Entrepreneurial Management and Leadership
- · Qualitative and Quantitative Research Methods

#### **Optional Classes (seven to be chosen)**

- Circular Economy and Transformations Towards Sustainability
- Contaminated Land
- Energy Economics
- Environmental Economics
- Environmental Impact Assessment
- Environmental Pollution Management
- Family Business
- Financial Engineering
- Games of Strategy
- Geographical Information Systems
- Global Water Policy
- Independent Study in Collaboration with Industry
- Internationalisation and Growth
- · Public Health Studies
- Social Entrepreneurship
- Strategic Innovation Management
- Sustainable Product Design and Manufacturing
- · Waste Management and Landfill Design
- Water and Environmental Management

MSc students undertake a dissertation.

#### 

12 months full-time; 24 - 36 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in any discipline (engineering, sciences, arts, law, business, education, languages, social sciences). No previous technical knowledge is required.

# HYDROGEOLOGY WWW.

**MSc** (full-time, part-time or distance learning)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Build upon your undergraduate degree towards a career in the highly interdisciplinary field of Hydrogeology

Develop technical skills and policy knowledge to sustainably manage water resources and address the global water crisis

Contribute to on-going, internationally-linked projects in water resources and sustainable development

Opportunities to work with industrial partners

Accredited by ICE, IStructE, CIHT and IHE as meeting the requirements for Further Learning for a Chartered Engineer for candidates who have already acquired a partial CEng accredited undergraduate degree

#### 

#### **Compulsory Classes**

- Aguifer Mechanics
- Contaminated Land
- Environmental Geochemistry
- Global Water Policy
- Groundwater Flow Modelling
- Hydrogeology
- Qualitative and Quantitative Research Methods
- Site Investigation and Risk Assessment

#### **Options Classes (four to be chosen)**

- Engineering Hydrology
- Environmental Impact Assessment
- Fundamentals of Environmental Forensics
- · Geographical Information Systems
- · Independent Study in Collaboration with Industry
- Principles of Environmental Microbiology
- Waste Management and Landfill Design
- Water and Environmental Management

MSc students undertake a dissertation.

#### 

12 months full-time; 24 - 36 months part-time (on-campus study); 36 months part-time distance learning, offering students a flexible learning mode of study

#### **ENTRY REQUIREMENTS**

Normally a first-class or second-class honours degree (or international equivalent) in earth sciences, civil engineering, environmental engineering, geology, or related science disciplines.

January 2024 start date available.
Visit www.strath.ac.uk for full details.

# SUSTAINABILITY AND ////////ENVIRONMENTAL STUDIES

MSc (full-time, part-time or distance learning)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Examine strategies and policy options for achieving sustainable development

Design your own curriculum to suit your career aspirations
Opportunity to carry out an industrial project

Suitable course for graduates of any background

Accredited by ICE, IStructE, CIHT and IHE as meeting the requirements for Further Learning for a Chartered Engineer for candidates who have already acquired a partial CEng accredited undergraduate degree

Distance learning options available

#### 

#### **Compulsory Classes**

- Circular Economy and Transformations Towards Sustainability
- Environmental Impact Assessment
- Qualitative and Quantitative Research Methods

#### Optional Classes (nine to be chosen)

- Climate Change Economics
- · Contaminated Land
- Economics of Inequality and Inclusive Growth
- Energy Economics
- Energy Resources and Policy
- Environmental Economics
- Environmental Pollution Management
- · Games of Strategy
- Geographical Information Systems
- Global Water Policy
- Independent Study in Collaboration with Industry
- Natural Resources, Sustainability and Governance
- Principles of Environmental Microbiology
- Public Health Studies
- Social Entrepreneurship
- Waste Management and Landfill Design
- · Water and Environmental Management
- Water and Wastewater Treatment Design

MSc students undertake a dissertation.

#### 

12 months full-time; 24 - 36 months part-time; 36 months part-time distance learning, offering students a flexible learning mode of study

#### 

Normally a first-class or second-class honours degree (or international equivalent) in any discipline (engineering, sciences, arts, law, business, education, languages, social sciences). No previous technical knowledge is required.

# DEPARTMENT OF DESIGN, MANUFACTURING AND ENGINEERING MANAGEMENT

#### **RESEARCH DEGREES**

MPhil, PhD

EngD Advanced Manufacturing: Forging and Forming

#### **Contact for Research Degrees**

**t:** +44 (0)141 548 2015 **e:** dmem-pgr@strath.ac.uk

#### **TAUGHT COURSES**

- · Advanced Manufacture: Technology and Systems
- Design Engineering/with Advanced Product Development/with Sustainability
- · Digital Manufacturing
- Engineering Management for Process Excellence
- · Mechatronics and Automation
- Product Design
- Supply Chain and Logistics Management/ Procurement Management/ Sustainability Management
- · Systems Engineering Management
- Engineering Project Management by Online Learning

#### **Contact for Taught Courses**

**t:** +44 (0)141 574 5484

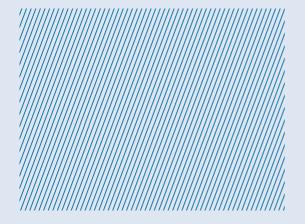
e: eng-admissions@strath.ac.uk

The Department of Design, Manufacturing and Engineering Management (DMEM) conducts broadbased education and research of relevance to the needs of industry and commerce, as well as public sector policy.

Our research is centred on the vision of 'Delivering Total Engineering'. We investigate processes, systems and technology to support and enable engineering from concept to remanufacture.

We host the Advanced Forming Research Centre – a partnership between the University of Strathclyde and global industrial manufacturing companies, the Centre for Precision Manufacturing, the Design Research Group, the Robotics and Autonomous Systems Group and National Made Smarter Research Centre in Smart Collaborative Industrial Robotics, the Sustainability and Remanufacturing Group and the Engineering Management Group (which is involved in the Strathclyde Institute for Operations Management, bringing together the leading experts in Operations Management from Strathclyde's Business School and the Engineering Faculty). We are also involved in the Advanced Manufacturing Industrial Doctorate Centre, Continuous Manufacturing and Crystallisation, the High Value Manufacturing Catapult, and the Weir Advanced Research Centre.

We also collaborate with the National Manufacturing Institute Scotland (NMIS) which is operated by the University of Strathclyde. The University is also the base for the Scottish Institute for Remanufacturing (SIR) and hosts the Maritime Research and Innovation centre UK (MarRI-UK).



# Department of Design, Manufacturing and Engineering Management Research Areas

#### **Creativity and Innovation**

Our research investigates the creative design process and how this can be optimised to ensure innovative products are delivered that meet user requirements. We look at how the product and engineering design process can best be employed to ensure through-life information and knowledge management, optimised decision-making, systems integration, and successful collaborative and distributed design.

#### **Materials**

we use multi-scale modelling techniques to investigate materials behaviours at different length-scales and to predict the performance of materials during both manufacturing processes and service conditions. Material types include metal alloys, composites and ceramics for industrial applications in sectors such as aerospace, automotive, nuclear, and oil and gas. We have developed techniques to manipulate the compositions and grain-sizes of metals to improve their mechanical properties. We have equipment, tools and techniques for destructive and non-destructive testing of materials to determine inherent material characteristics with a view to optimising performance and manufacture.

#### **Operations**

Our research is focused on supporting the development and sustained performance of engineering businesses through the optimisation of their engineering operations. This includes design, manufacture and end of life. We work in close partnership with engineering organisations, including food and drink, oil and gas, utilities, aerospace and automotive, who directly benefit from our research outputs through real and lasting impacts to their performance.

#### **Sustainability**

Sustainability underpins all our research from the point of view of: longevity and optimisation of products and systems; continued business performance; reducing environmental impact of the processes; tools and technologies used to design and manufacture products and systems; reducing resources; through-life product support strategies. We focus on sustainable manufacturing practices and contribute to developing smart, efficient and sustainable factories of the future. The work in this area is focused around the activity of the Sustainability and Remanufacturing Group which supports the Scottish Institute for Remanufacture (SIR).

#### **Technology**

Research spans various areas within DMEM, including manufacturing processes, precision engineering, microand nano-manufacturing, robotics and autonomous systems, and digital manufacturing. We also investigate the use of digital technologies to support manufacturing research such such as Industry 4.0, the digital factory and virtual manufacturing.

# 

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Offered by the Advanced Manufacturing Industrial Doctorate Centre

Undertake world-leading research in manufacturing techniques, working with global industry

Gain industrial experience

#### 

#### Year 1, Compulsory Classes

- Manufacturing Automation
- Micro- and Nano-Manufacturing
- Strategic Technology Management
- Advanced Materials and Production Technology
- · Advanced Forming Technology and Systems
- Research Methodology

#### Year 1, Optional Classes (six to be chosen)

- Product Design Techniques
- Strategic Supply Chain Management
- Project Management
- Sustainable Product Design and Manufacturing
- Fundamentals of Lean Six Sigma
- Systems Thinking and Modelling

#### Years 2 - 4

You develop a research thesis based on manufacturing challenges while based within the sponsoring company.

#### 

Normally a first-class or second-class honours degree (or international equivalent), or a Masters qualification in a science or engineering discipline.

#### 

Funding support may be available to UK students to cover university tuition fees and also provide an annual stipend of around £15,000, tax free, for four years.

#### MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain the skills to develop a new career in the manufacturing industry sector

Undertake an individual and group project

Manage a project with an industrial client to address a practical problem

Triple accredited programme

#### 

#### **Compulsory Classes**

- Advanced Materials and Production Technology
- Micro- and Nano-Manufacturing
- Advanced Forming Technology Systems
- Manufacturing Automation
- · Strategic Technology Management
- Industrial Group Project
- Individual Project

#### **Optional Classes (three to be chosen)**

- Project Management
- Sustainable Product Design and Manufacturing
- Fundamentals of Lean Six Sigma
- Systems Thinking and Modelling
- Strategic Supply Chain Management
- Mechatronic Systems Design Techniques

#### 

12 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant science, technology or engineering discipline.

# DESIGN ENGINEERING/WWW.AMDVANCEDWARD PRODUCT DEVELOPMENT/SUSTAINABILITY

#### MSc

### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Choose to follow the Advanced Product Development or Sustainability stream

Enhance your knowledge and practical design skills

Graduates from a variety of technical disciplines will be able to address the demands for better products

Triple accredited programme - Institution of Engineering and Technology (IET), Institution of Engineering Designers (IED) and Institution of Mechanical Engineers (IMechE)

#### 

#### **Compulsory Classes**

- Global Design
- Industrial Group Project
- · Design Management
- Product Modelling and Visualisation
- Design Methods
- Individual Project

# Specialist Classes by Theme Design Engineering (compulsory 3)

- Sustainability, Mechatronic Systems Design Techniques
- · Engineering Risk Management
- Sustainable Product Design and Manufacturing
- Advanced Materials and Production Technology
- Remanufacturing

# Design Engineering with Advanced Product Development (compulsory 3)

- Engineering Risk Management
- Mechatronic Systems Design Techniques
- Advanced Materials and Production Technology

#### **Design Engineering with Sustainability (compulsory 3)**

- Sustainable Product Design and Manufacturing
- Remanufacturing
- Sustainability

Further Optional Class (all students to choose 1)

#### 

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant engineering, technology or science discipline.

### 

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain insight into cyber-physical technologies and developing business models

Prepare for a career within the global digital technologies-driven manufacturing sector

Apply your skills in a practical industry-linked project

#### 

#### **Compulsory Classes**

- Digital Manufacturing Concepts
- Manufacturing Automation
- · Design for Industry 4.0 and Smart Products
- · Mechatronic Systems Design Techniques
- Knowledge and Information Management for Engineers
- Industrial Group Project
- Individual Project

#### **Optional Classes (three to be chosen)**

- Sustainable Product Design and Manufacturing
- Systems Thinking and Modelling
- · Micro- and Nano- Manufacturing
- Advanced Materials and Production Technology
- · Management of Innovation

#### 

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in engineering, technology, or a business-related discipline.

January 2024 start date available. Visit www.strath.ac.uk for full details.

# 

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Combine process performance with strategic business analysis

Focus on the use and application of techniques that enable production and operational effectiveness

Contribute to organisational competitiveness

#### 

#### **Compulsory Classes**

- · Supply Chain Operations
- Enterprise Resource Planning
- Total Quality Management
- · Fundamentals of Lean Six Sigma
- · Management of Innovation
- Project Management
- Industrial Group Project
- Individual Project

#### Optional Classes (two to be chosen)

- People, Organisation and Technology
- · Strategic Technology Management
- Strategic Supply Chain Management
- Systems Thinking and Modelling
- Ouantitative Business Analysis
- · Performance Measurement and Management
- Business Analytics

#### 

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant engineering, technology, science, business or similar discipline.

January 2024 start date available. Visit www.strath.ac.uk for full details.

# MECHATRONICS AND AUTOMATION

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain knowledge and skills to develop multidisciplinary mechatronic systems with an integrated approach

Benefit from the facilities of our digital design and manufacture studio and prototype workshops

Contribute to future mechatronic product development

Triple accredited programme - Institution of Engineering and Technology (IET), Institution of Engineering Designers (IED) and Institution of Mechanical Engineers (IMechE)

#### 

#### **Compulsory Classes**

- Manufacturing Automation
- Mechatronic Systems Design Techniques
- Engineering Risk Management
- Product Modelling and Visualisation
- · Project Management
- Industrial Group Project
- Individual Project

#### **Optional Classes (three to be chosen)**

- Systems Thinking and Modelling
- Design Methods
- Control Principles
- Robotics: Systems and Control
- · Intelligent Sensing and Reasoning

#### 

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant science, technology or engineering discipline.

# PRODUCT DESIGN

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain enhanced skills in creative product design

Learn about products aesthetics and human-centred design, digital modelling and rapid prototyping

Suitable for graduates from industrial/product design or innovation-related courses

Accredited by the Institution of Engineering Designers (IED) and the Institution of Engineering and Technology (IET)

#### 

#### **Compulsory Classes**

- Global Design
- Design Methods
- · Design Management
- Product Modelling and Visualisation
- · Management of Innovation
- Design Form and Aesthetics
- Human-Centred Design
- Industrial Group Project
- Individual Project

#### **Optional Classes (one to be chosen)**

- Sustainability
- Sustainable Product Design and Manufacturing
- Remanufacturing
- Advanced Material and Production Technology
- · Engineering Risk Management
- People, Organisation and Technology
- Strategic Technology Management
- · Supply Chain Operations
- · Strategic Supply Management
- Enterprise Resource Planning
- Management of Total Quality and Continuous Improvement
- · Fundamentals of Lean Six Sigma
- Financial Engineering
- Systems Thinking and Modelling
- · Mechatronic Systems Design Techniques

#### 

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant engineering, technology design, or innovation discipline.

January 2024 start date available. Visit www.strath.ac.uk for full details.

# SUPPLY CHAIN & LOGISTICS MANAGEMENT/PROCUREMENT/MANAGEMENT/SUSTAINABILITY MANAGEMENT

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain an in-depth understanding of the strategic and operational issues relating to supply chain management

Contribute towards making organisations competitive

Accredited by the Chartered Institute for Procurement and Supply

#### 

The programme is delivered in collaboration with the Department of Management Science.

#### **Compulsory Classes**

- Strategic Supply Chain Management
- Supply Chain Operations
- Enterprise Resource Planning
- Advanced Project Management
- Case Studies in Supply Chain Management
- People, Organisation and Technology
- Performance Measurement and Management
- Individual Project

#### **Specialist Classes by Theme**

- Logistics Management Management of Total Quality and Continuous Improvement, Lean and Green Logistics, Spreadsheet Modelling and Demand Forecasting
- Procurement Management Strategic Procurement Management, Spreadsheet Modelling and Demand Forecasting, Organisation Buying Behaviour and Structures
- Sustainability Management Sustainable Product Design and Manufacturing, Lean and Green Logistics, Remanufacturing

#### 

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant engineering, technology, science, business or similar discipline.

# 

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain skills to manage technical systems and the people responsible for their development

Learn to apply a systems-thinking approach to address complex management situations

Understand the role of technology in business strategy

#### 

#### **Compulsory Classes**

- · Systems Architectures and Design
- People, Organisation and Technology
- · Engineering Risk Management
- Strategic Technology Management
- Systems Thinking and Modelling
- Systems Engineering Concepts
- Individual Project
- Industrial Group Project

#### **Optional Classes (two to be chosen)**

- Design Methods
- · Design Management
- Product Modelling and Visualisation
- Sustainable Product Design and Manufacture
- · Product Costing & Financial Management
- Strategic Supply Chain Management
- · Business Simulation Methods
- Knowledge and Information Management for Engineers
- Design for Industry 4
- Smart Products

#### 

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in any discipline.

# 

#### MSc/PgDip/PgCert

(part-time online learning)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Developed with the student in mind, and in close partnership with industry experts, this degree provides both the flexibility and in-demand skillset for graduates aiming to competitively propel their career forward in industry

Unique combination of advanced engineering skills, project management expertise, and industry-linked project work for real-world experience

Gain a range of project management skills, including procurement knowledge, financial engineering competency and strategic awareness

#### 

#### **Compulsory Classes**

- Project Management
- Financial Information
- Engineering Risk Management
- Management of Total Quality and Continuous Improvement
- · People, Organisation and Leadership
- Strategic Procurement Management
- Introduction to Systems Thinking Modelling and Optimisation
- · Technology and Innovation Management
- Industrial Group Project
- Individual Project (MSc students only)

#### 

MSc: 36 months part-time PgDip: 24 months part-time PgCert: 12 months part-time

#### 

MSc: Normally a first-class or second-class honours degree (or international equivalent) in a relevant engineering, technology, or science discipline.

PgDip/PgCert: Degree, or good HND or equivalent; other qualifications with relevant industrial experience will be considered on an individual basis. Depending on satisfactory progress, students may transfer from the Diploma to the Masters course.

also a major highlight during my MSc Design Engineering course. I had the opportunity to propose and work on my own idea and the project introduced me to the field of research. My dissertation was one of the most rewarding experiences I have had in my career to date.

Amy Grech
MSc Design Engineering

# DEPARTMENT OF ELECTRONIC AND ELECTRICAL ENGINEERING

#### **RESEARCH DEGREES**

MPhil, PhD, EngD

#### **Contact for Research Degrees**

**t:** +44 (0)141 548 2170

e: eee-pgr@strath.ac.uk

#### **TAUGHT COURSES**

- 5G Advanced Communications
- Advanced Electrical Power & Energy Systems
- Autonomous Robotic Intelligent Systems
- · Electrical Power & Energy Systems
- · Electronic and Electrical Engineering
- Machine Learning & Deep Learning
- · Offshore Wind Energy
- Renewable Energy and Decarbonisation Technologies
- · Wind Energy Systems

With partners:

**Smart Grids** 

Future Energy and Power System Operation and Management (for residents of Hong Kong only, applications through HKUST & CLP Power Academy)

#### **Contact for Taught Courses**

**t:** +44 (0)141 574 5484

e: eng-admissions@strath.ac.uk

We combine research excellence with global industry engagement and first-class teaching to deliver an outstanding student experience.

From creating future low carbon smart grids and next generation wireless communications, to designing enhanced surveillance and defence systems, our research delivers industrial, economic and societal impact.

Our activities are driven by two research institutes, supported by 70 academic staff and 300 researchers:

- Institute for Energy and Environment
- Institute for Sensors, Signals and Communications

These Institutes work closely with key UK and global industry, business and government partners, and are home to several world-class research and experimental facilities. These include four EPSRC Centres for Doctoral Training, the Power Networks Demonstration Centre (PNDC), the

Advanced Nuclear Research Centre, Hyperspectral Imaging Centre, Whitespace Wireless Communications Centre and Scotland 5G Centre, and FIRST, a key UK laboratory for non-destructive testing and evaluation.

The Institutes' activities also underpin our taught programmes and knowledge exchange initiatives.

Our Graduate School offers specialist research and taught MSc programmes. These are enhanced by an extensive scholarship scheme providing bursaries, internships and industry engagement, ensuring you gain an education relevant for today's job market and in the future.

# Research Activities Institute for Energy and Environment

We are among Europe's leading and largest electrical power systems and energy technology university research groups. Our fundamental, strategic and applied research portfolio addresses the key technical, policy and economic aspects of energy systems. This is underpinned by four core areas of expertise:

- Advanced Electrical Systems specialises in research, development and demonstration activities on all aspects of power systems, spanning energy, aerospace and the marine sectors. Expertise includes protection and automation, power system analysis and renewables integration, active network management, demand side management, intelligent systems and data analytics, energy markets and economics, and sensing and condition monitoring applications.
   Particular emphasis is placed on future power networks and smart grids, encompassing renewable generation, energy storage and flexible demand.
- High Voltage Technologies (HVT) has international expertise in the fields of electrical plant, high-voltage materials and components, HV asset management, condition monitoring and diagnostics, insulation systems including environmentally friendly dielectric liquids and gases, lightning protection, pulsed-power and power modulation technologies, transient discharges in gases and liquids, and non-thermal plasmas and their practical environmental and biomedical applications. HVT also houses The Robertson Trust Laboratory for Electronic Sterilisation Technologies (ROLEST), a world-class research facility dedicated to the development of novel electrical and optical decontamination and sterilisation technologies for healthcare, biomedical and public health applications.

- Wind Energy and Control is an international leader in all aspects of wind energy, advanced control theory and its application. Research activities focus on renewable energy technologies to tackle climate change and create sustainable clean energy systems. These include dynamic turbine analysis, modelling and simulation, systems engineering methods, non-linear control system design and their optimisation, along with resource assessment and condition monitoring.
- Power Electronics, Drives and Energy Conversion

   is renowned for its research, development and experimental expertise in all aspects of power conversion, including renewable energy, smart grid, automotive, aerospace, and electric machine drive applications. Activity ranges from the development of individual power converters, to bespoke hardware and software control platforms and the design, testing and real-time simulation of power electronic systems. Research is supported by world-class simulation and design facilities, and three specialist power electronics laboratories.

## Institute for Sensors, Signals and Communications

From fundamental theory to practical applications, our research supports the advancement of technologies and systems in sectors including healthcare, defence, telecommunications, and oil and gas. Our expertise is focused in four core research centres:

Centre for Signal and Image Processing –
 is renowned for its research on the creation of
 new algorithms, architectures and applications.
 It provides a platform for the development of tools,
 techniques and systems used for the acquisition,
 analysis and extraction of information. Research
 work spans biomedical signal and image processing,
 robotics, MIMO systems, RF signals and systems,
 wireless communication technologies, and video
 analytics and surveillance.

- Centre for Intelligent Dynamic Communications

   brings together internationally-respected groups
   in advanced communications technology and
   digital signal processing (DSP). It has three core
   areas of expertise: broadband networks, mobile
   communications and DSP-enabled communications.

   Their activities focus on optical sub-systems and
   devices, FPGA systems, security for future networks,
   routing protocols, wireless network regulation and
   legislation, infrastructure protection, IIOT, 5G Advanced
   Systems, Dynamic spectrum access and
   TV White Space Radio.
- Centre for Microsystems and Photonics has
   extensive expertise in photonics sensor technology,
   microsystems and lab-on-a-chip. Research generates
   sensor solutions driven by industrial optical metrology
   requirements and bio-medical optics, while the
   lab-on-a-chip activities support biological, medical
   and pharmaceutical science. Research opportunities
   in MEMS design, characterisation and manufacture,
   optical sensors technology, fibre lasers, and
   microfluidic devices for biological and healthcare
   applications are available.
- Centre for Ultrasonic Engineering is internationally renowned for its expertise in the design and implementation of ultrasonic transducers and transducer systems. Its multidisciplinary research combines work on engineering, materials, simulation and biology to deliver innovative transducer systems. It addresses markets in non-destructive evaluation, robotics and automation, bioacoustics, industrial process ultrasound, biomedical applications and transduction.

# 5G ADVANCED ////////////////COMMUNICATIONS ///

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop expertise in the software, hardware, systems integration and management aspects of 5G systems

Understand 5G mobile and wireless systems, with applications in autonomous and cyber-physical systems, IoT, spectrum management and big data

The course is fully accredited by the UK professional body, the Institution of Engineering and Technology (IET)

#### 

#### **Compulsory Classes**

- Digital Signal Processing Principles
- Information Transmission and Security
- 5G Communications Networks
- Assignment and Professional Studies

#### Optional Classes (minimum of two to be chosen)

- Software Engineering
- Advanced Digital Signal Processing
- Image and Video Processing
- · Embedded System Design
- Sensor Technologies

You also undertake a three-month summer research project on a topic of your choice. Opportunities exist to conduct this through the Department's competitive MSc industrial internships. BT, Selex ES, Xilinx, Texas Instruments, MathWorks, NXP/Qualcomm, Cisco and Vodafone are just some of the industry partners working with Strathclyde. You will have the opportunity to engage with them throughout your study.

#### 

12 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in electronic, electrical or communications engineering, or a related physical sciences discipline.

# ADVANCED ELECTRICAL POWER AND ENERGY SYSTEMS

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Industry-defined electrical power programme

Gain expertise in electrical energy and power systems – from fundamental technologies, application and user requirements, to the business and regulatory landscape within which power and utility companies work

The course is fully accredited by the UK professional body, the Institution of Engineering and Technology (IET)

#### 

#### **Compulsory Classes**

- Advanced Power & Energy Systems
- High Voltage Technology and Electromagnetic Compatibility
- Power Electronics for Energy and Drive Control Power System Economics, Markets and Asset Management
- Wind Energy and Distributed Energy Resources
- · Assignment and Professional Studies

#### Optional Classes (minimum of two to be chosen)

- Digital Signal Processing Principles
- Information Transmission and Security
- 5G Communications Networks
- Control Principles
- Wind Turbine Technology
- Software Engineering
- Offshore & Pan European Supergrids
- Hardware IoT Communication System Design
- Data Analytics and AI for Energy Systems

In Year 1, you complete a selection of taught classes and a mini practical project, to develop research and professional engineering skills.

Year 2 combines a major research project within the electrical power and energy disciplines, with a selection of advanced classes designed to broaden your understanding of the topic chosen.

#### 

24 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in electronic, electrical, power or energy engineering.

# AUTONOMOUS ROBOTIC ////INTELLIGENT SYSTEMS ///

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Learn about the technologies for autonomous control and machine learning, with applications spanning robotics, sensor networks and digital manufacturing

Study the new emerging self-sustaining and intelligent devices for IOT and industry 4.0 environments

#### 

This course is delivered jointly with the Department of Design, Manufacturing & Engineering Management.

#### **Compulsory Classes**

- Intelligent Sensing and Reasoning and through Machine Learning
- · Neural Networks and Deep Learning
- · Digital Manufacturing Concepts
- Manufacturing Automation
- Design for Industry 4 and Smart Products
- Mechatronic System Design Techniques
- · Robotics and Control Systems
- · Assignment and Professional Studies

#### Optional Classes (minimum of one to be chosen)

- Advanced Forming Technology Systems
- Advanced Materials and Production Technology
- Advanced Microcontroller Applications
- System Thinking and Modelling
- Micro and Nano-Manufacturing
- Image and Video Processing
- Control Principles
- Advanced Digital Signal Processing
- · Embedded System Design
- · Design Management
- Knowledge and Information Management for Engineers
- Strategic Technology Management
- Design Methods
- Product Modelling and Visualisation

You also undertake a three-month summer research project on a topic of your choice. Opportunities exist to conduct this through the Department's competitive MSc industrial internships.

#### 

12 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in electronic, electrical, communications or design manufacture engineering, or a relevant science-related discipline.

# ELECTRICAL POWER /// AND ENERGY SYSTEMS //

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop the design, planning and operational expertise needed for careers in the global electricity and renewable energy sectors

Engage with our industry partners on real-world energy challenges

The course is fully accredited by the UK professional body, the Institution of Engineering and Technology (IET)

#### 

#### **Compulsory Classes**

- Advanced Power and Energy Systems
- Power System Economics, Markets and Asset Management
- · Assignment and Professional Studies

#### Optional Classes (minimum of one to be chosen)

- High Voltage Technology and Electromagnetic Compatibility
- Wind Energy and Distributed Energy Resources
- Power Electronics for Energy and Drive Control
- Sensor Technologies
- Offshore and Pan European Supergrids
- Data Analytics and AI for Energy Systems
- Power Electronics Devices, Drives & Machines

You also undertake a three-month summer research project on a topic of your choice. Opportunities exist to conduct this through the Department's competitive MSc industrial internships which are offered with industry partners such as SSE, Scottish Power and PNDC.

#### 

12 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in electronic, electrical, power or energy engineering, or a related cognate discipline.

January 2024 start date available. Visit www.strath.ac.uk for full details.

# ELECTRONIC AND WWW. ELECTRICAL ENGINEERING MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Advanced subject options across the entire electronic and electrical engineering discipline

Tailor the course to match your career interests

Benefit from purpose-built study and learning facilities, and the chance to engage with industry partners

The course is fully accredited by the UK professional body, the Institution of Engineering and Technology (IET)

#### 

#### **Compulsory Classes**

Assignment and Professional Studies (20 credits)

### Optional Classes

#### (five x 20 credit modules to be chosen)

- Power Electronics, Machines and Applications
- Power System Design, Operation and Protection
- Digital Signal Processing Principles
- · Information Transmission and Security
- 5G Communications Networks
- Control Principles
- Advanced Power and Energy Systems
- High Voltage Technology and Electromagnetic Compatibility
- · Power Electronics for Energy and Drive Control
- Power System Economics, Markets and Asset Management
- Wind Energy and Distributed Energy Resources
- Advanced Digital Signal Processing Principles
- Embedded Systems Design
- Image and Video Processing
- Sensor Technologies
- Software Engineering

You also undertake a three-month summer research project on a topic of your choice. Opportunities exist to conduct this through the Department's competitive MSc industrial internships.

#### 

12 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in electronic, electrical communications, power or energy engineering, or a related cognate discipline.

January 2024 start date available. Visit www.strath.ac.uk for full details.

# 

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop expert knowledge of, and the ability to design, complex machine learning and deep neural networks systems for use in industry

Focus on architectures, algorithms & novel engineering and software technologies

#### 

This course is delivered jointly with the Department of Computer & Information Sciences.

#### **Compulsory Classes**

- Intelligent Sensing and Reasoning and through Machine Learning
- Neural Networks and Deep Learning
- Digital Signal Processing Principles
- · Big Data Technologies
- Machine Learning for Data Analytics
- Assignment and Professional Studies

#### Optional Classes (a minimum of one to be taken)

- Image and Video Processing
- Information Access and Mining

You also undertake a three-month summer research project on a topic of your choice. Opportunities exist to conduct this through the Department's competitive MSc industrially engaged projects. These are offered in collaboration with selected industry partners.

#### 

12 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in electronic or electrical engineering, or a computer science discipline.

January 2024 start date available.
Visit www.strath.ac.uk for full details.

# RENEWABLE ENERGY AND DECARBONISATION TECHNOLOGIES

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

The UK's first MSc course in renewable energy and decarbonisation technologies

Develop expert knowledge to address and implement the transition from fossil fuels to zero/low carbon sources through the integration of electrical technologies into our current and future energy systems

Engage with our industry partners on real-world energy challenges

This course will provide both a theoretical and practical grounding for future managers and engineers of energy-based projects. Where possible, the final individual project is carried out in industry, providing an opportunity for personal research, and giving a deeper insight into particular energy transition future

The course aims to equip graduates with the required skills, knowledge and understanding necessary to find employment in the energy sectors, or to undertake research in a specialised energy decarbonisation-related field

#### 

You are required to complete a minimum of 180 credits (one compulsory 20 credit module, eight compulsory 10 credit modules, a 60 credit MSc project and two optional 10 credit modules).

# Compulsory Classes (all 10 credit modules unless specified)

- Asset Management and Condition Monitoring
- Energy Economics
- Wind Energy and Distributed Energy Resources 1
- Solar Energy Systems
- Energy Storage Systems
- Assignment and Professional Studies (20 credits)
- Energy Decarbonisation Technologies
- · Power Electronics Principles
- · Offshore Wind Farms O&M and Economics
- Project in Electrical Energy Transition (60 credits)

# Optional Classes (students should select 2, 10 credit modules from this list)

- · Systems Engineering Concepts
- Sustainable Product Design and Manufacturing
- Renewable Marine Energy Systems
- Strategic Technology Management
- Environmental Impact Assessment
- Circular Economy and Transformations towards Sustainability
- Design for Industry 4 and Smart Products
- Waste Management and Landfill Design
- Control and Protection of Future Networks
- Offshore and Pan European Supergrids

#### 

12 months full-time, 24 months part-time

#### 

Normally a first-class or second-class Honours degree (or international equivalent) in electronic, electrical, mechanical, power or energy engineering, or a related cognate discipline.

## 

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

The offshore wind energy market is booming, and it urgently needs qualified people to further succeed in being the leading sustainable energy source

#### 

This programme is delivered in collaboration with the Department of Naval Architecture, Ocean & Marine Engineering.

This programme has three components

- Instructional Modules
- Group Project
- Individual Project

#### **Compulsory Classes**

- Wind Turbine Technology
- Offshore Wind Turbines Dynamics Modelling
- Offshore Structural Integrity
- Wind Generators Modelling and Control
- Risk and Reliability Engineering
- Offshore Wind Farms Operation & Maintenance and Economics

#### 

12 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in naval, marine, civil, mechanical, electrical, power or energy engineering, or a relevant technical engineering discipline.

# 

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop the expertise to strengthen, lead and transform the high-growth global wind energy industry

Study within Europe's largest and leading university electrical power and energy technology research group

The course is fully accredited by the UK professional body, the Institution of Engineering and Technology (IET)

#### 

#### **Compulsory Classes**

- Wind Turbine Technology
- · Power Systems and Wind Integration
- Assignment and Professional Studies

#### Optional Classes (minimum of three to be chosen)

- Power Electronics, Machines and Applications
- Power System Design, Operation and Protection
- Advanced Power and Energy Systems
- Power Electronics for Energy and Drive Control
- Power System Economics, Markets and Asset Management
- · Control Principles
- Inspection and Survey
- · Geographical Information Systems
- Environmental Impact Assessment
- High Voltage Technology and Electromagnetic Compatibility
- Energy Economics
- Renewable Marine Energy Systems

#### **Research Project**

You also undertake a three-month summer research project on a topic of your choice. Opportunities exist to conduct this through the Department's competitive MSc industrial internships.

#### 

12 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent), in electronic, electrical or mechanical engineering, or a related discipline (physics, mechatronics, control or systems engineering).

# 

**MSc** (Jointly Awarded)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Double degree in partnership with Comillas Pontifical University, Spain and in collaboration with Iberdrola, Minsait/Indra, Gridspertise and UFD Distribucion Electricidad S.A.

Paid industrial internships in the UK/USA/Spain/Brazil Build the skillset to meet the needs of the power sector

Gain expertise in electrical power and smart grids

#### 

You will study at two leading universities for electrical power systems and smart grids in Spain and the UK, then complete a short paid internship with Iberdrola, Minsait/Indra, Gridspertise or UFD Distribucion Electricidad S.A. at one of their offices in the UK, USA, Spain or Brazil.

The MSc is fully delivered in English.

Semester 1 (Sept - Dec, Comillas Pontifical University)

#### **Compulsory Classes**

- Fundamentals of Power Systems
   OR Fundamentals of Telecommunications
- · Regulation and New Business Models
- Operation and Planning of Future Distribution Networks
- · Telecommunications for Smart Grids
- Leadership, Change Management and Corporate Responsibility

Semester 2 (Jan - mid-May, University of Strathclyde)

#### **Compulsory Classes**

- Control and Protection of Future Networks
- Hardware IoT Communication System Design
- 5G Communications Networks
- Cyber Security
- Data Analytics and AI for Energy Systems
- Power Electronics for Transmission and Distribution

Semester 3 (mid-May - mid-Sept).

Individual project – industry defined paid internship with Iberdrola, Minsait/Indra, Gridspertise or UFD Distribucion Electricidad S.A.

#### 

12 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in electronic, electrical or telecommunications engineering, or a related physical sciences subject.

UKVI-recognised English language qualification at C1 level (IELTS 7.0) for non-native English speakers.

# DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING

#### **RESEARCH DEGREES**

MPhil, PhD

#### **Contact for Research Degrees**

**t:** +44 (0)141 548 2846 **e:** mae-r@strath.ac.uk

#### **TAUGHT COURSES**

- · Advanced Mechanical Engineering
- Advanced Mechanical Engineering with Specialist Pathways: Aerospace/Energy Systems/Materials/ Power Plant Technologies
- Advanced Mechanical Engineering with Industrial Placement
- Advanced Mechanical Engineering by Modular Study
- · Advanced Mechanical Engineering by Online Learning
- Sustainable Engineering: Renewable Energy Systems and the Environment (see page 30)
- Satellite Data for Sustainable Development
- Advanced Materials Engineering

#### **Contact for Taught Courses**

**t:** +44 (0)141 574 5484

e: eng-admissions@strath.ac.uk

The Department is one of the biggest and best of its kind in the UK. We apply our knowledge and understanding in mechanical and aerospace engineering to solve challenges facing industry and society. We host the Energy Systems Research Unit, the Aerospace Centre of Excellence, the James Weir Fluids Laboratory, and the Mechanics and Materials Research Centre.

#### **Research Themes**

#### **Energy**

The Energy Systems Research Unit develops and tests new methods and technologies for energy reduction and supply, and help designers create clean and sustainable solutions. We offer consultancy services that include the laboratory testing of new products, the performance appraisal of proposed new designs or retrofits, and the field monitoring of energy systems in use. Our research goals include:

- improving the accuracy of the mathematical models and numerical methods used to represent heat, mass and power flow
- applying simulation to optimise energy component/ system performance and promote energy efficiency measures
- evolving software engineering techniques that increase researcher efficiency and programme robustness
- improving confidence in predictions through the development of programme validation, calibration and accreditation procedures
- constructing knowledge-based design support environments to enable application interoperability and effective teamwork

#### **Aerospace**

Research in the Aerospace Centre of Excellence delivers new approaches to systems engineering, flight mechanics and computational intelligence to underpin new concepts and technologies for the sustainable exploration and exploitation of space, space situational awareness, remote sensing, robotics and autonomy, space services and cost-effective, efficient and reliable global transport and access to space. The Centre is part of the University's strategic research theme of Ocean, Air and Space which examines key challenges in space systems and satellite application, space science and exploration, remote sensing and Earth observation, quantum technology, sustainable transport, risk, reliability and resilience engineering, robotics and autonomy, and ocean engineering.

#### **Fluids**

At the James Weir Fluids Laboratory, we explore the fundamental flow physics for new fluids technologies in the fields of energy, sustainability, nanotechnology, health and transport. We have developed simulation tools to test new concepts, products and designs.

We have experimental platforms for the analysis of complex fluids, various forms of thermal convection and microfluidics, and we are skilled in industrial computational fluid dynamics on local and national high-performance computers. Our current projects cover particle dynamics in fluid flow, nanoliquids, interfacial dynamics, microscale gas flows and micro droplet technology.

#### **Materials**

Materials for energy conversion applications, renewable and nuclear conversion and bio-mechanics are among the areas explored by the Mechanics and Materials Research Centre. Our research focuses on mechanics (including solid mechanics), polymers and polymer composites, and tribology and tribo-corrosion. Our department also hosts the Tribo-Corrosion Network and is home to the Advanced Materials Research Laboratory.

This work spans fundamental and applied research in new and emerging areas, including:

- materials for energy conversion applications
- renewable (marine) and nuclear conversion
- · advanced composites
- heterogeneous materials
- · tribo-corrosion
- bio-mechanics
- friction stir welding
- · high-temperature mechanics

We are recognised internationally in the field of structural integrity and design by analysis and developments of standards in these areas. Our research in Materials is enhanced through strategic relationships with research facilities like the National Manufacturing Institute for Scotland the and the Advanced Forming Research Centre.

#### **Facilities**

The Department's large-scale laboratory facilities include:

- High Speed Computer (1088 cores)
- 1.5m low-speed/o.9m environmental wind tunnel
- facilities for carrying out vibration and shock tests
- machinery condition diagnosing from vibration signals
- polymer processing laboratory
- optical strain measurement facility
- autoclave with 10 bar pressure capacity and temperatures up to 650°C
- · flight simulator
- extensive materials testing and analyses capabilities

#### **SCHOLARSHIP PROGRAMMES**

#### **Research Scholarships**

Each year, the Department has a limited number of fully-funded PhD scholarships available to first-class applicants. Internal applications normally take place in March and June each year. Prospective students who hold (or expect to hold) a first-class honours degree or an MSc with Distinction are encouraged to make an informal expression of interest between November and January to take advantage of potential scholarships.

January 2024 start date available. Visit www.strath.ac.uk for full details.

# ADVANCED MECHANICAL ENGINEERING (WITH AEROSPACE) ENERGY SYSTEMS/POWER PLANT TECHNOLOGIES/MATERIALS)

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Study at one of the oldest, largest and most respected Mechanical Engineering departments in the UK

Extensive range of technical modules offers students choice and flexibility when learning advanced mechanical topics

Gain industry relevant skills, such as project management and risk analysis

Accreditation by the Institution of Mechanical Engineers (IMechE)

#### **SPECIALIST PATHWAYS**

In addition to the Advanced Mechanical Engineering (AME programme), the following specialist pathways are offered at MSc level only:

- MSc Advanced Mechanical Engineering with Aerospace
- MSc Advanced Mechanical Engineering with Energy Systems
- MSc Advanced Mechanical Engineering with Materials
- MSc Advanced Mechanical Engineering with Power Plant Technologies

#### 

#### **Compulsory Classes**

Two academic semesters consisting of nine technical modules, plus at least three transferable skills modules. Students will also undertake an individual research project. Technical classes are chosen from Department's Level 5 classes including:

- · Pressurised Systems
- Machinery Diagnosis and Condition Monitoring
- · Advanced Topics in Fluid Systems Engineering
- · Spaceflight Systems
- Introduction to Engineering Optimisation
- Control Systems Design
- Nuclear Power Systems
- Energy Systems Analysis
- Advanced Materials Processing & Manufacturing
- Fundamentals of Materials Science
- Hydraulics
- Applied Metallurgy

- Degradation of Metals and Alloys FEA in Mechanical Engineering Design
- Structural Integrity
- Introduction to Open Source Computational Dynamics
- Engineering Plasticity

# Aerospace (compulsory for AME with Aerospace, Optional for other streams)

- Fundamentals of Aeronautical Engineering
- · Aerodynamic Propulsion Systems
- · Spaceflight Mechanics

# Energy (compulsory for AME with Energy Systems, Optional for other streams)

- Energy Resources and Policy
- Electrical Power Systems
- Energy Modelling and Monitoring

## Material (compulsory for AME with Materials, Optional for other streams)

- Engineering Composites
- Advanced Materials Processing and Manufacturing
- Industrial Metallurgy

# Power Plant Technologies (compulsory for AME with Power Plant Technologies, Optional for other streams)

- Boiler Thermal Hydraulics
- Gas and Steam Turbines
- · Electrical Power Systems

#### **Transferable Skills Modules**

- Design Management
- Project Management
- Risk Management
- Financial Engineering
- Environmental Impact Assessment
- Sustainability

#### **Individual Project**

Students undertake an individual research project the theme of which can be industry-related or aligned to engineering research at the University.

#### 

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant engineering or physical sciences discipline.

# 

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain in-depth technical understanding of advanced mechanical topics

Enhance your learning and build a professional network by undertaking a 2-3 month industrial placement

Accreditation by the Institution of Mechanical Engineers (IMechE)

#### 

Students choose from the technical and transferable skills modules listed opposite and in addition undertake an industrial placement for up to three months

- Semester 1, September to December: taught classes
- Semester 2, January to May: taught classes
- June to September: industrial placement
- Semester 3, October to January: dissertation

#### **Industrial Placement**

Students are required to complete an industrial placement of between 10 - 12 weeks in duration.

While students are responsible for securing a placement, the Department supports the process in a number of ways:

- Bespoke sessions, in partnership with the Careers Service, support students in sourcing, applying for and securing placements.
- Students are encouraged to attend employability events, such as the Scottish Graduate Fair, to gain exposure to industrial opportunities and network with potential placement companies
- One on one advice and support from academic advisers to discuss suitable opportunities

The placement aims to provide students with an understanding of:

- commercial environments and operations
- key policies in practice (e.g. Health & Safety and Quality Assurance) and the role they play in operations
- how to self-reflect and evaluate their skills development and the contribution that their placement made to the overall operations of the company

Our students gain placements across various industries and sectors. Placements can be based in Glasgow or across the UK. Often, students will continue the relationship with their placement sponsor by undertaking an industry aligned research project with them.

#### **Individual Project**

Students undertake an individual research project, the theme of which can be industry-related or aligned to engineering research at the University. The dissertation can be linked to the industrial placement and worked on with the industry partner.

#### 

18 months full-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant engineering or physical sciences discipline.

This course is only available for January 2024 start. Visit www.strath.ac.uk for full details.

# MSc SATELLITE DATA FOR WWW.SUSTAINABLE DEVELOPMENT

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Build a fundamental understanding of GIS, remote sensing, data analytics and machine learning while choosing electives in aerospace, urban design, clean energy solutions, environmental impact, entrepreneurship, management and advanced data analysis

Study applied learning, in the frame of the UN's Sustainable Development Agenda, to find real life solutions to global development challenges

Focus on sustainability across various industries by engaging in industry guest lectures, case studies and student projects

#### 

You'll take 180 credits made up of 120 credits of taught modules and the 60-credit individual project. The 12-month full-time course spans three semesters as follows:

#### **Compulsory modules**

- · Geographical Information System
- Satellite Data Assimilation and Analysis
- · Machine Learning for Satellite Data
- Satellite Applications for Sustainable Development Goals (SDGs)
- Individual project

#### **Optional modules**

Entrepreneurship/Business/Management

- · Entrepreneurship, Innovation and Commercialisation
- New Venture Planning
- · Project Management
- Risk Management

#### **Machine Learning & Data Analysis**

- · Big Data Fundamentals
- Big Data Tools and Techniques
- · Machine Learning for Data Analytics
- Database Development
- Database Fundamentals
- Legal, Ethical and Professional issues for the Information Society

#### **Urban Design**

- Design Studio
- Urban Landscape Design
- Sustainability

#### **Civil & Environmental**

- Air Pollution, Climate Change & Human Health
- Environmental Impact Assessment
- Circular Economy & Transformations Towards Sustainability

#### **Energy Systems**

- Energy Resources & Policy
- · Energy Systems and Analysis
- · Energy Modelling & Monitoring
- Renewable Marine Energy Systems

#### **Aerospace**

- Spaceflight Mechanics
- Spaceflight Systems

#### **Individual Project**

Students undertake an individual research project the theme of which can be satellite data-related (with the possibility to collaborate with NGOs, research organisations or industries) or aligned to engineering research at the University.

#### 

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a Engineering, Science, Public Policy, Law, or Business discipline.

Other qualifications may also be considered provided there is evidence of capacity for postgraduate study.

## MSc ADVANCED MATERIALS ENGINEERING

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Build a comprehensive understanding of fundamental materials engineering, including industrial metallurgy, composites and advanced materials

Gain a broad knowledge base of advanced manufacturing processes and the role of materials sciences play in these

Take advantage of industry exposure via sponsored research projects, site visits and guest lectures and other employability led initiatives with the National Manufacturing Institute of Scotland and the Advanced Forming Research Centre

## 

You'll take 180 credits made up of 120 credits of taught modules and the 60-credit individual project. The 12-month full-time course spans three semesters as follows:

## **Compulsory modules**

- · Fundamentals of Materials Science
- Degradation of Metals and Allovs
- Engineering Composites
- Industrial Metallurgy
- Advanced Materials Processing & Manufacturing

## **Optional modules**

Students will study 70 credits from the below list of modules:

Transferable skills (generic) modules (up to four modules can be selected):

- · Design Management
- Project Management
- Risk Management
- Financial Engineering
- Sustainability
- Environmental Impact Assessment

Technical modules (up to four modules can be selected or any Level 5 module of the Department of Mechanical and Aerospace Engineering):

- Tissues Mechanics
- Biomaterials and Biocompatibility
- Prestressed Concrete, Composite Materials and Structural Stability
- Molecular and Interfacial Science
- Molecular and Interfacial Science (online)
- Micro- and Nano-Manufacturing
- Advanced Forming and Technology Systems
- Advanced Materials and Production Technology

Students undertake an individual research project, the theme of which can be related to the National Manufacturing Institute of Scotland and the Advanced Forming Research Centre or aligned to engineering research at the University.

## 

12 months full-time; 24 months part-time

## 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant engineering discipline or physical sciences, or equivalent professional qualification. A lower class degree may be considered with relevant work experience.

## ADVANCED MECHANICAL ENGINEERING

MSc (part-time online learning)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Students engage in flexible, remote study through a variety of active learning techniques in our virtual learning environment

Complete an individual project with an industry theme or aligned to engineering research at Strathclyde

Extensive range of technical modules offers students choice and flexibility when learning advanced mechanical topics

The course is ideal for students who are in employment after an undergraduate degree and would like to gain an MSc degree accredited by the Institution of Mechanical Engineers (IMechE)

## 

Students select a combination of specialist and transferable skills modules and undertake an individual project.

- Aerodynamics in C
- Applied Metallurgy
- Boiler Thermal Hydraulics
- Degradation of Metals and Alloys
- Electrical Power Systems
- FEA In Mechanical Engineering Design
- Fundamentals of Materials Science
- Gas and Steam Turbines
- Hydraulics
- Introduction to Open Source Computational Dynamics
- Nuclear Power Systems
- Pressurised Systems
- Structural Integrity
- Financial Information
- People Organisation and Leadership
- Project Management
- Strategic Procurement Management
- · Technology and Innovation Management
- Fundamentals of Aeronautical Engineering
- Aero-Acoustics

## **Individual Project**

Students undertake an individual research project in their final year, the theme of which can be industry-related or aligned to engineering research at the University. It can also be connected to your current employment or serve as a large piece of work to demonstrate your skills to your potential employer during your application.

## 

MSc: 36 months part-time PgDip: 24 months part-time PgCert: 12 months part-time

## 

Normally a first-class or second-class honours degree (or international equivalent) in engineering or physical sciences; an equivalent professional qualification may also be considered.

January 2024 start date available.
Visit www.strath.ac.uk for full details.

## ADVANCED MECHANICAL ENGINEERING BY MODULAR STUDY

MSc/PgDip/PgCert by stand-alone modules (part-time, on campus or online)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

This course is perfect for professionals seeking to upskill their knowledge in key mechanical engineering fields

The flexible framework of the course allows students to tailor the content and delivery of the course to their own needs

Students can select to study on-campus or online modules

Study stand-alone modules or transfer credits to a PGCert, PgDip or a MSc degree (accredited by the Institution of Mechanical Engineers (IMechE))

A large offering of modules across the mechanical engineering discipline are available

## 

Students can select any of the optional level 5 modules available within the department. There are approximately 35 modules available, some of which include:

- · Pressurised Systems
- Spaceflight Mechanics
- Engineering Plasticity
- Control Systems Design
- Energy Resources and Policy
- Energy Systems Analysis
- Aerodynamic Propulsion Systems
- Spaceflight Mechanics
- Engineering Composites
- · Polymer and Polymer Composites
- Industrial Metallurgy
- Boiler Thermal Hydraulics
- Gas and Steam Turbines
- Applied Metallurgy
- FEA In Mechanical Engineering Design
- · Fundamentals of Materials Science
- Fundamentals of Aeronautical Engineering
- Geographical Information System
- Satellite Data Assimilation & Analysis
- · Machine Learning for Satellite Data
- Satellite Applications for the Sustainable Development Goals (SDGs)

## **Individual Project**

Students who progress to the MSc, will be required to undertake an individual research project in their final year, the theme of which can be industry related or aligned to engineering research at the University.

## 

MSc: Up to 60 months part-time distance learning PgDip: Up to 48 months part-time distance learning PgCert: Up to 24 months part-time distance learning Individual modules: 4 months

## 

Normally a first-class or second-class honours degree (or international equivalent) in engineering or physical sciences, or equivalent professional qualification. A lower-class degree may be considered with relevant work experience. Consideration will be given to those from differing backgrounds based on their experience on a module by module basis.

## DEPARTMENT OF NAVAL ARCHITECTURE, OCEAN AND MARINE ENGINEERING

## **RESEARCH DEGREES**

MPhil, PhD

## **Contact for Research Degrees**

**t:** +44 (0)141 548 4913

e: naome-research@strath.ac.uk

## **TAUGHT COURSES**

- Advanced Naval Architecture
- · Marine Engineering
- Marine Engineering with Specialisation in Autonomous Marine Vehicles
- Offshore Wind Energy
- Ship and Offshore Structures
- Ship and Offshore Technology (two-year programme offered jointly with Hamburg University of Technology)
- · Subsea and Pipeline Engineering
- Technical Ship Management
- MSc Offshore Energy Transition by Online Learning
- Sustainable Engineering: Offshore Renewable Energy (part of Sustainable Engineering Programme, (see page 30)
- Sustainable Engineering: Marine Technology (part of Sustainable Engineering Programme, (see page 30)

## **Contact for Taught Courses**

**t:** +44 (0)141 574 5484

e: eng-admissions@strath.ac.uk

The Department of Naval Architecture, Ocean and Marine Engineering (NAOME) has staff expertise covering all areas of Naval Architecture, Ship Design, Marine Engineering, Ocean Engineering, High-Speed and Small Craft Design.

The Department's laboratory and computing facilities include one of the largest university ship model experiment tanks in the UK, a small towing/wave-making tank and a diesel engine test facility. The Department also works with a variety of software packages which include AVL, AUTOCAD 2020, STAR CCM+, DMV SESAM, MATLAB, MAXSURF and MOSES. A full list of our software packages can be found on our website. The Department also has a racing yacht which students can use.

Research and teaching activities within the Department are complemented and enhanced by an excellent hydrodynamic test facility, fully turbulent flow channel, small ocean basin, ship full mission ship bridge simulator, virtual reality laboratory and a marine engine lab.

The Department also hosts one research institute and three research centres; i) the Offshore Engineering Institute ii) the Marine Safety Research Centre; an industry-University partnership involving NAOME, Royal Caribbean Cruise Lines and DNV GL Classification Society iii) the Maritime Human Factors Centre and iv) Peridynamics Research Centre. The Department is also contributing to three EPSRC-funded Centres for Doctoral Training: IDCORE, WAMESS and REMS.

## Research

Our Department is one of the world's leading marine technology departments conducting research on ships and other offshore structures including marine renewable energy devices. We have Europe's largest team of postgraduate researchers and academic staff to sustain the production of useful and innovative research ideas. Our research is strategically grouped under two research units: the Maritime Transport Research Unit and the Ocean Energy Research Unit. We work closely with key UK and global industry and take part in many diverse research projects and networks.

January 2024 start date available. Visit www.strath.ac.uk for full details.

## ADVANCED NAVAL // ARCHITECTURE //////

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain advanced practical knowledge in the field of Naval Architecture

Benefit from guest lectures by industry leaders

Develop skills and knowledge that are relevant for emerging challenges of naval architecture

Accreditation by the Royal Institution of Naval Architects (RINA) and the Institute of Marine Engineering, Science and Technology (IMarEST)

## 

The programme has three components:

- Instructional Modules
- Group Project
- Individual Project

## **Compulsory Classes**

- Ship Operability and Control
- Ship Powering in Service
- Advanced Marine Design
- Maritime Safety and Risk
- Advanced Marine Structures
- · Theory and Practice of Marine CFD
- · Maritime Regulatory Framework

## **Optional Modules:**

- Data Analysis for Engineering
- · Offshore Structural Integrity
- Autonomous Marine Vehicles and Digital Twins
- Shipping Economics and Market Sector Analysis

## 

12 months full-time

## 

Normally a first-class or second-class honours degree (or international equivalent) in a naval, nautical, architectural, marine, offshore or shipping engineering, or related technology discipline.

## **Research Areas**

## **Maritime Transport Research:**

Our largest and most diverse key research area is supported by our internationallyleading academic staff and the world's first dedicated Maritime Safety Research Centre. Our research activities are significantly strengthened by having access to regional supercomputer, ARCHIE-WeSt, and by our experimental marine engineering facilities, which includes a fuel cell laboratory and a full mission ship bridge simulator. The main activities in this key area focus on the Intact/ Damage Stability and Survivability of Ships; Maritime Human Factors and Navigational Safety; Energy Efficient Ship Design and Operations: Marine Engineering. Alternative Fuels and Emissions; and Life Cycle Risk Management.

## **Ocean Energy Research:**

Our research in this area has a strong focus on offshore oil/gas and renewable energy.

Our internationally-renowned academic staff conduct research, development and demonstration activities in this key area, supported by excellent testing facilities (such as 75-metre towing/wave tank and fully turbulent circulating sea water channel) and complemented by the High Performance Computing platform for the West of Scotland Centre (ARCHIE-WeST) to conduct time-intensive numerical fluid-structure interaction simulations. Our research activities in this area involves the numerical and experimental hydrodynamics, structure and material research, offshore and other subsea structures as well as the marine renewables energy devices.

January 2024 start date available. Visit www.strath.ac.uk for full details.

## MARINE WWW.

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Receive a degree which is recognised and accredited by Royal Institution of Naval Architects (RINA) and the Institute of Marine Engineering, Science and Technology (IMarEST)

Being led by key experts and academics, work in groups to solve real marine engineering problems of today and future

## 

The programme has three components:

- Instructional Modules
- Group Project
- Individual Project

## **Compulsory Classes**

- Advanced Marine Engineering
- Marine Engineering Simulation and Modelling
- Maritime Safety and Risk
- Onboard Energy Management and Marine Environment
- Systems Availability and Maintenance
- · Shipping Economics and Market Sector Analysis

## **Optional Classes**

- Risk Analysis and Management
- Data Analysis for Engineering
- Autonomous Marine Vehicles and Digital Twin
- Project Management

## 

12 months full-time

## 

Normally a first-class or second-class honours degree (or international equivalent) in a naval, nautical, marine, ocean, offshore, or related technical engineering or science discipline.

## MARINE ENGINEERING WITH SPECIALISATION IN AUTONOMOUS MARINE VEHICLES

## MS

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

This programme aims to address an identified market need for a postgraduate qualification that is relevant to the maritime industry and which develops skills and knowledge in autonomy and IT technologies used in the sector

Accredited by Royal Institution of Naval Architects (RINA) and the Institute of Maritime Engineering, Science and Technology (IMarEST)

## 

The programme has three components:

- Instructional Modules
- Group Project
- Individual Project

## **Compulsory Classes**

- Intelligent Sensing and Reasoning and through Machine Learning
- Neural Networks and Deep Learning
- Data Analysis for Engineering
- Autonomous Marine Vehicles and Digital Twin
- System Availability and Maintenance
- Marine Engineering Simulation and Modelling
- Underwater Vehicles

## **Optional Classes**

- Shipping Economics and Market Sector Analysis
- Maritime Regulatory Framework
- · Maritime Safety and Risk

## 

12 months full-time

## 

Normally a first-class or second-class honours degree (or international equivalent) in a naval, nautical, marine, ocean engineering, or related technical engineering discipline.

research that there was also a very welcoming culture at Strathclyde, which is of course important to me as an international student. I came here not just to study but also to have a memorable experience, which I have definitely had.

**Md Arif Hasan** 

MSc Supply Chain & Procurement Management

## 

**MSc** (two-year programme with Hamburg University of Technology)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain an award in the name of two universities

Complete an intensive German language course

Accreditation by the Royal Institution of Naval

Architects (RINA) and the Institute of Marine Engineering, Science and Technology (IMarEST)

## 

## Year 1 (University of Strathclyde)

- · Risers and Mooring Lines
- Marine Pipelines
- Dynamics of Floating Offshore Installations
- · Maritime Safety and Risk
- Design and Construction of Floating,
   Production, Storage and Offloading Vessels
- · Theory and Practice of Marine CFD
- Offshore Structural Integrity
- Finite Element Analysis of Floating Structures
- Group Project
- · Research Project

## Year 2 (Hamburg University of Technology)

- Structural Analysis of Ships and Offshore Structures
- Ship Design
- Seakeeping of Ships and Naval Architecture Laboratory
- · Masters Thesis

## **Compulsory Classes**

- Non-Linear Structural Analysis
- Ship Vibration
- · Fatigue Strength of Ships and Offshore Structures
- Arctic Technology
- Innovative CFD Approaches
- Manoeuvrability and Shallow Water Ship Hydrodynamics

## 

24 months full-time

## 

Normally a first-class or second-class honours degree (or international equivalent), in a marine or marine-related engineering subject. Knowledge of structural mechanics, hydrostatics, fluid dynamics, ship resistance and propulsion and ship design is essential.

January 2024 start date available. Visit www.strath.ac.uk for full details.

## TECHNICAL SHIP // MANAGEMENT /////

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Accreditation by the Royal Institution of Naval Architects (RINA) and the Institute of Marine Engineering, Science and Technology (IMarEST)

Develop skills essential for efficient management of ships and fleets

## 

## **Compulsory Classes**

- Project Management
- Systems Availability and Maintenance
- Shipping Economics and Market Sector Analysis
- Maritime Regulatory Framework
- Onboard Energy Management and Marine Environment
- Maritime Safety and Risk

## **Optional Classes**

- Ship Powering in Service
- Data Analysis for Engineering
- · Financial Engineering

## 

12 months full-time

## 

Normally a first-class or second-class honours degree (or international equivalent) in a naval, nautical, marine, ocean, shipping, or a related technical engineering discipline.

**EE**The content and structure of my course strikes a perfect balance between theoretical knowledge and practical application, allowing us to develop a comprehensive understanding of the subject matter. It also incorporates industry guest lectures, site visits, and real-world case studies, enabling us to bridge the gap between academia and industry, preparing us for successful careers in the field.

**Brian Cabrera** 

MSc Sustainable Engineering: Offshore Renewable Energy

January 2024 start date available. Visit www.strath.ac.uk for full details.

## 

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Accreditation by the Royal Institution of Naval Architects (RINA) and the Institute of Marine Engineering, Science and Technoloy (IMarEST)

Gain advanced knowledge of subsea systems

Benefit from excellent teaching facilities

## 

The programme has three components:

- Instructional Modules
- Group Project
- Individual Project

## **Compulsory Classes**

- Maritime Safety and Risk
- Risers and Mooring Lines
- Marine Pipelines
- Underwater Vehicles
- Subsurface Technology
- Marine Pipeline Integrity
- Dynamics of Floating Offshore Installations
- Finite Element Analysis of Floating Structures

## 

12 months full-time

## 

Normally a first-class or second-class honours degree (or international equivalent) in a naval, nautical, marine, ocean, shipping or related technical engineering discipline.

January 2024 start date available.
Visit www.strath.ac.uk for full details.

## SHIP AND OFFSHORE STRUCTURES

MS

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Accreditation by the Royal Institution of Naval Architects (RINA) and the Institute of Marine Engineering, Science and Technology (IMarEST)

Learn about the factors influencing the dynamic behaviour of offshore installations

## 

The programme has three components:

- Instructional Modules
- Group Project
- Individual Project

## **Compulsory Classes**

- Risers and Mooring Lines
- Dynamics of Floating Offshore Installations
- Finite Element Analysis of Floating Structures
- Advanced Marine Structures
- Reliability-based Structural Design and Plated Structures
- Design and Construction of Floating, Production, Storage and Offloading Vessels
- Offshore Structural Integrity
- System Availability and Maintenance

## 

12 months full-time

## 

Normally a first-class or second-class honours degree (or international equivalent) in a naval, nautical, marine, ocean, shipping or related technical engineering discipline.

## 

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

The offshore wind energy market is booming, and it urgently needs qualified people to further succeed in being the leading sustainable energy source

Accredited by Royal Institution of Naval Architects (RINA) and the Institute of Maritime Engineering, Science and Technology (IMarEST)

## 

This programme is delivered in collaboration with the Department of Electronic & Electrical Engineering.

The programme has three components:

- Instructional Modules
- Group Project
- Individual Project

## **Compulsory Classes**

- Wind Turbine Technology
- Offshore Wind Turbines Dynamics Modelling
- Offshore Structural Integrity
- Wind Generators Modelling and Control
- Offshore Wind Farms Operation and Maintenance and Economics
- Risk and Reliability Engineering

## 

12 months full-time

## 

Normally a first-class or second-class honours degree (or international equivalent) in naval, marine, civil, mechanical, electrical, power or energy engineering, or a relevant technical engineering discipline.

## OFFSHORE ENERGY // TRANSITION //

MSc (part-time online learning)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Designed for those who are working full-time in industry and are seeking further training for new job opportunities and enhanced career trajectory in the offshore renewable energy sector

Gain skills in engineering problem-solving, energy transition and renewable energy technologies

Become equipped with the necessary training to work as a future leader in offshore energy transition

## 

The programme has four components:

- Compulsory Modules
- Optional Modules
- Individual Thesis Project
- Individual Dissertation Project

## **Compulsory Classes**

- Energy Transition Barriers and Readiness
- Techno-Economics of Energy Systems and Integration
- Environmental Impact Assessment
- Health and Safety for Offshore Energy Systems

After completing the modules, you'll work on a literature review-based individual thesis project followed by a case-oriented dissertation project to design an energy transition roadmap for your current company or a nominated company from the list of suggestions provided by the course leader.

## 

18-60 months of part-time online study with average duration of 36 months

## 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant engineering or technical subject and/or extensive industrial experience.

# TIEFICULTY OF HUMANITIES & SOCIAL SCIENCES

Our graduates form the backbone of business, industry, and public services in Scotland and around the world.

We believe education has the capacity to change lives. Providing an enriching student experience is a priority for us.

In Humanities & Social Sciences we focus on the building blocks of society and human endeavour. Studying here, you will better understand how human beings think, act and interact with one another and the world around them. Employers value this knowledge.

Research informs our teaching and helps us make a difference to business, industry and society as a whole. We have a vibrant research culture and our research is noted for its impact.

Our Graduate School is home to over 300 research students from more than 30 countries and we support their development through a tailored training programme.

Our departments touch every aspect of human life: education and learning; government and public policy; humanities and culture; justice and the law; lifelong learning; psychological sciences and health; and social work and social policy.

We have strong links with governments, global organisations in both the public and private sector, and academic networks. Our graduates are sought-after and intellectually engaged. Focused on applying knowledge, they know how the world works - and how to make it a better place.

## **Contact**

Humanities & Social Sciences e: studywithus-hass@strath.ac.uk





## THE STRATHCLYDE INSTITUTE OF EDUCATION

PhD Education or Applied Autism Research MPhil Education EdD Education

## Contact for Research Degrees

e: hass-postgrad@strath.ac.uk

## **MPhil/PhD in Applied Autism Research**

The Strathclyde Institute of Education offers a unique opportunity to study for this Applied Autism Research degree and welcomes proposals from prospective students to study at doctorate level.

Our research is dedicated to addressing the socialemotional challenges associated with autism and making positive changes that facilitate the autistic community's full involvement in society. Admission to the PhD programme is primarily based on the quality of a proposal and how it fits our philosophy to conduct autism research in applied (real-world) settings. We aim to understand autism through world-class research, translate theory into practical applications and to fully include autistic participation within research.

This demands a multidiscipline approach to research, and we welcome prospective students from across a range of disciplines. Prospective students should develop proposals to match areas of research expertise held by members of staff within the Institute of Education and are encouraged to contact potential supervisors in advance of their application. Your potential supervisor will hold expertise in applied autism research and will seek the best multidisciplinary research team for you.

At the University of Strathclyde, we draw on expertise from across our Departments and Faculties including Engineering, Law, Psychological Sciences and Health, Counselling and Psychotherapy, Social Work and Social Policy, Computer & Information Sciences and Law. We welcome multidisciplinary proposals that fit our philosophy to conduct autism research in applied (real-world) settings. We offer a research community with excellent connections to national and international autism research and practice communities.

## MPhil/PhD in Education

The Institute of Education welcomes proposals from prospective students to study at doctorate level.

Admission to the PhD programme is primarily based on the quality of a proposal and its match to areas of research expertise held by members of staff.

We offer a research community with excellent connections to national and international education research and practice communities. You will be invited to participate in a range of research and knowledge exchange activities where you can learn from and with us about research, policy and practice innovation and evaluation.

## **Research Areas**

Our academic staff have national and international recognition for their research and represent a range of expertise spanning diverse aspects of education. The following areas are some of the key aspects in which we can offer supervision:

- evidence-based practice
- · learning-based pedagogies
- policy evaluation
- gender and sexuality
- equality and diversity
- curriculum development
- inclusive education and issues around children with additional support needs
- · children and childhood
- social justice and civic responsibility

In addition, colleagues are at the forefront of innovative research approaches including quantitative methods, secondary data sets, mixed methods, visual methodology and participatory ways of working.

These areas are supported by specialist centres within the Institute, such as the Centre for Lifelong Learning, Scotland's National Centre for Languages (SCILT) and the Centre for Children and Young People Studies in which postgraduate research students are encouraged to play a full part.

The Strathclyde Institute of Education is part of the Scottish Doctoral Training Centre through which Economic Social Research Council (ESRC) Studentships in Education can be gained.

We are home to:

- Scotland's National Centre for Languages (SCILT)
- Confucius Institute

We have a vibrant research culture and our work is noted for its high impact as we work to better the lives of children and practitioners in Scotland and beyond.

## DOCTOR OF /// EDUCATION ///

EdD

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

One of only a few programmes in the UK that offer specialist pathways

Transfer Masters-level credits from other programmes

Choose full-time or part-time study modes – supported through the University's Virtual Learning Environment

This professional doctoral degree is aimed at those who have been working in the education sector for a number of years. It provides the opportunity to undertake research aligned to your role and practice as an educationalist.

## We offer a general pathway or the following specialist routes:

- Supporting Teacher Learning (part-time and full-time)
- Educational Leadership (part-time and full-time)
- Philosophy with Children (part-time and full-time)
- Bilingual Education (part-time and full-time)
- Autism (MEd part-time and MSc full-time)
- Early Years Pedagogue (part-time only)
- Inclusive Education (part-time only)
- Digital Technologies (part-time and full-time)
- Philosophy and Culture (part-time and full-time; daytime taught modules)

## 

Full-time students will attend a range of taught modules through the week and the occasional Saturday. Sessions will comprise elements of lecture, workshop and seminar.

## Year 1 (taught stage)

## Semester 1

- Methods of Enquiry, Literature and Scholarship
- Choice of optional or subject specific pathway class(es)

## Semester 2

- Advanced Research Methods and Proposal
- Choice of optional or subject specific pathway class(es)

## Years 2 & 3 (research stage)

Thesis supervised by two supervisors

## ENTRY REQUIREMENTS FOR RESEARCH DEGREES

A Masters degree or evidence of Masters-level study, plus full-time practitioner experience (or equivalent) in a professional field with an educational dimension.

International students require a minimum IELTS score of 6.5 in writing and reading. Prospective research students should consult individual staff research profiles on our website and are encouraged to contact potential supervisors in advance of their application.

## POSTGRADUATE TAUGHT COURSES

- PGDE Primary/Secondary
- TESOL and Intercultural Communication (offered jointly with the Department of Humanities)
- Applied Educational and Social Research
- Autism Studies
- Education Studies
- Educational Leadership
- Early Years Pedagogue
- Part-time MEd programmes including MEd Education Studies with pathways
- Postgraduate Certificate in Education (International)
- Leading Learning & Transformative Practice in Colleges (with TQFE)
- Professional Practice

## Contact for Postgraduate Taught Courses

e: studywithus-hass@strath.ac.uk

## PART-TIME COURSE STRUCTURE !////

The part-time programme has been designed to provide a level of flexibility that facilitates study for those continuing to work full-time while undertaking the EdD. The core classes are taught on-campus on Saturdays from 10am - 4pm. The timing of the optional classes varies but is focused around evening and weekends.

## Year 1 (taught stage)

## Semester 1

Methods of Enquiry, Literature and Scholarship

### Semester 2

 Choice of optional or subject specific pathway class(es)

## Years 2 (taught stage)

## Semester 1

 Choice of optional or subject specific pathway class(es)

### Semester 2

· Advanced Research Methods and Proposal

## Years 3 - 5 (research stage)

· Thesis supervised by two supervisors

## 

If you have completed a Masters in the last 5 years then it may be possible to apply for our fast track route within the part-time programme which reduces the length of the taught phase by 1 year. By applying for accreditation of prior learning for up to 60 credits then you can complete the two core EdD modules within one year. Contact the department for further information.

## 

Applicants will normally have a Masters degree in Education (or closely-related area). Exceptionally, a candidate with substantive professional experience may be considered for admission provided they can demonstrate understanding of and a capacity to engage with the different dimensions of educational research.

## PROFESSIONAL GRADUATE DIPLOMA IN EDUCATION

## **Primary and Secondary Pathways**

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Study at the largest provider of teacher education in Scotland

Learn from on-campus classes and 18 weeks of placement in schools

Become qualified to teach in locations worldwide

Opportunity to achieve Masters-level credits

## 

The course provides the theoretical and practical starting point to your teaching career. You will acquire the skills, attitudes and competencies to communicate in the classroom.

Those following the Primary route will be qualified to teach from nursery (approximately age 3) to Primary 7 (age 12). The Secondary route qualifies you to teach specific subjects to pupils aged 11 to 18 years.

## **Masters-level Credits**

As part of the course, you will have the opportunity to gain up to 120 Masters-level credits. On completion of these, there are opportunities in the subsequent year to work towards further Masters qualifications, either on a face-to-face or online basis.

## **Compulsory Classes**

- Professional Skills; Professional Practice taught both on campus and in schools, this module will enable you to become an effective teacher through learning pedagogical theory, observing experienced teachers and applying your knowledge and understanding in the practical context.
- Professional Skills; Curriculum and Pedagogy examines what is taught; how it is taught and how teachers use assessment to promote learning.
- Education Studies; Professional Values develops your understanding of educational issues in a broader intellectual context.
- Professional Learning through Enquiry learn how to plan practitioner enquiry with the option of carrying out a small scale research project.

You are expected to keep a portfolio of progress throughout the course. This prepares you for the continuation of professional development during your teaching career.

## 

36 weeks full-time, including 18-week placement experience.

## SECONDARY SUBJECT AREAS AVAILABLE

You will have the opportunity to qualify in one or two subjects, depending on the combination.

Art and Design	Gaelic
Mandarin	Biology
Geography	Physical Education
Business Education	German
Physics	Chemistry
History	Psychology
Computing	Home Economics
Religious Education	English
Italian	Spanish
French	Mathematics
Technological Education	Modern Studies

All of the above subjects can be taught in the medium of Gaelic.

## 

A university degree validated by a higher education institution in the UK, or a degree of an equivalent standard from an institution outside the UK (a degree should have at least 360 credit points). For the Secondary route, we require passes in at least two years' progressive study in the subject(s) you want to teach.

National Qualifications in English at SCQF Level 6 (for example, Higher Grade) or an accepted alternative; National Qualifications in Mathematics at SCQF Level 5 (e.g. National 5, or Intermediate 2) or an accepted alternative.

We also require the following information, which is considered when selecting candidates for interview.

- evidence that you have experience of working with children in a school setting or related context
- an up to date understanding of education
- · an ability to relate to people

## LEADING LEARNING & TRANSFORMATIVE PRACTICE IN COLLEGES (WITH TOFE)

## **Postgraduate Certificate**

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

A groundbreaking approach to obtaining the Teaching Qualification in Further Education (TQFE)

100% online, flipped learning, with early evening 'huddles' every 2 weeks

Authentic assessment including observations, professional enquiry and a viva

## 

This programme places students at the centre, embeds a socially progressive philosophy and is research informed. There is an emphasis on meeting the needs of all students (including pastoral), collaboration and developing digital competencies.

## **Compulsory Classes**

Three 20 credit modules:

- Module 1 Leading Learning in Colleges
- Module 2 Transforming Practice through Enquiry
- · Module 3 Achieving Professional Standards

## 

Choice of start dates: September or January
The programme is designed to be completed in 9
months, but students can take up to 24 months if
necessary (e.g. to suit work commitments).

## 

For admission to the Postgraduate Certificate an Honours degree is preferred, although an ordinary degree will be considered with relevant experience. Applicants without a degree will be able to apply for the undergraduate pathway. Questions about admission should be addressed to the Programme Leader.

Students must also meet the minimum requirements for undertaking a Teaching Qualification in Further Education, as per Scottish Government requirements. Access to a suitable workplace setting to undertake a minimum of 120 hours of teaching practice over the duration of the programme is required.

An undergraduate pathway at SCQF level 9 is also available.

January 2024 start date available. Visit www.strath.ac.uk for full details.

## TESOL & INTERCULTURAL COMMUNICATION

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain the theoretical and practical skills to teach English to learners with a wide range of social, cultural and communicative goals

Benefit from the expertise of educationalists, linguists, and literature/culture scholars

## 

## **Compulsory Classes**

- · Language Learning in a Multilingual World
- Introduction to Intercultural Communication
- Contemporary Issues in Language Teaching
- Research Methodologies and Reasoning

## Optional Classes (choose two from the following; option classes subject to change year on year)

- Digital Technologies in Language Teaching
- Re-imagning TESOL in the 21st Century
- Curriculum Development in TESOL
- Narrative Processing across Languages, Cultures and Media
- Transcultural Fandom and British Popular Culture
- Children's Literature and the Four Nations

## 

Students write a dissertation of 12,000 - 15,000 words on a topic relating to the course.

## 

12 months full-time; 24 months part-time Entry dates: September and January

## 

Undergraduate degree with at least a 2:1 or degree lower than this with professional experience if applicants have worked in an education related setting. IELTS overall score of 6.5 (no individual test score below 6.0) or equivalent.

## APPLIED EDUCATIONAL /// AND SOCIAL RESEARCH //

## MS

(distance learning)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Learn to evaluate, design, conduct, analyse and justify applied research

Benefit from teaching by internationally-recognised experts

Tailor the choice of classes to your personal interests

## 

## **Compulsory Classes**

- Educational Research and Enquiry
- Design Strategies in Educational and Social Research
- Data Collection in Educational and Social Research
- Data Analysis in Educational and Social Research

## Optional Classes (one to be chosen)

- Further Quantitative Research Design and Data Analysis
- Further Qualitative Research Design and Data Analysis

## 

Students write a dissertation of 12,000 - 15,000 words on a topic relating to the course.

## 

12 months full-time (attendance and blended learning); 24 part-time (distance learning)

## 

An undergraduate degree or equivalent.

## 

MSc MEd

(distance learning)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Understand a range of complex theories essential to supporting the autistic profile

Translate theory into practice with an Educational Practice Placement

Receive input from internationally-respected autism experts

## 

## **Compulsory Classes**

- Conceptual Frameworks
- The Spectrum of Autism
- Responding to the Impact of Autism: Approaches and Interventions
- Autism Placement & Practice Module
- · Research Methods and Reasoning
- Dissertation

Our full-time students will complete a compulsory educational practice placement within our partner school in North Lanarkshire or our Third Sector Partnerships and complete a reflective practice journal as part of the core placement module.

## Full time Optional Modules: (one to be chosen)

- Autism & Co-occurring conditions
- Autism & Schooling
- Multi-professional work and family Support

## Part-time Optional Modules: (two to be chosen)

- Autism & Co-occurring conditions
- · Independent Study Module
- Autism & Schooling
- Multi-professional Work and Family Support

## 

12 months full-time

5 years MEd part-time/distance learning

## 

Undergraduate Honours degree in a related discipline, or equivalent qualification, and direct experience of living or working with autistic people. For the MEd, experience is essential as students must demonstrate theory to practice links. For the MSc, experience is advantageous.

January 2024 start date available. Visit www.strath.ac.uk for full details.

## 

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop a solid foundation for understanding transformative processes in all cultural contexts

Enhance practice and career opportunities in the broader field of formal and informal education

Gain a grounding in research methods and reasoning

## 

## **Compulsory Classes**

- Thinking about Education
- · Frameworks of Learning
- · Globalisation, Society and Education Policy
- Research Methods and Reasoning
- Dissertation

## **Optional Classes (others are available)**

- Alternative Education
- Philosophy of Technology and Education
- Education and Self-Formation in Cultural Contexts

## January entry: Optional Classes (choose two of the four modules)

- Alternative Education
- Philosophy of Technology and Education
- Education and Self-Formation in Cultural Contexts
- Education Studies

## 

12 months

Entry dates: September and January

## 

Degree or relevant professional qualification, or a combination of qualifications and experience demonstrating capacity for postgraduate study.

## EARLY YEARS ( PEDAGOGUE ///

**MEd** 

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Recognised by the Scottish Government

Blended approach of professional training and networking with practice-based assessments

Informed by contemporary research and international perspectives

## 

## **Compulsory Classes**

- Taking Action: child, family and community efficacy
- Creating stimulating learning environments: indoors and outside
- Listening to children and hearing their voices
- The connected child: early child development
- · Leading in a time of change
- Child-centred and child-focused approaches to practitioner research
- Dissertation

## 

36 months

## 

The Early Years Pedagogue is a specialist postgraduate route for General Teaching Council for Scotland registered teachers and SSSC registered educators with a Bachelor of Arts in Childhood Practice. Equivalent qualifications, professional registration and experience will be considered for applicants.

Applicants should hold a post with an appropriate age group (3-8), or have sufficient guaranteed access to such a position in order to fulfil the assessment requirements of each module.

## EDUCATIONAL /// LEADERSHIP

MEd

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Enhance your professional practice in leadership

Develop your understanding of leadership and the purposes which educational leadership serves

Gain insights into your own professional development and an understanding of yourself as a leader

## 

## **Year 1 Compulsory Classes**

- Conceptions of Leadership
- Leadership for Learning
- Leadership for Equity,
   Inclusion and Social Justice

## Year 2 Classes

- Research Methods and Reasoning\*
- Leadership for School Improvement
- Contexts for Leadership

\*You may replace Research Methods and Reasoning with the Year 3 class Strategic Leadership to complete a Postgraduate Diploma. However, you would not then be able to progress to Year 3.

## Year 3

You can choose to take the class Strategic Leadership, plus a project within your workplace to evaluate the impact of a proposed strategic change on student learning.

Alternatively you can choose to undertake dissertation under the guidance of a supervisor, in a subject area of your choice.

## 

36 months

## 

Good undergraduate degree or relevant professional qualification, a teaching qualification (or its equivalent) or relevant experience within an educational setting.

## PROFESSIONAL PRACTICE

MEd

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Progress your PGDE qualification into a recognised and respected master's award

Develop your practice according to research informed understandings of education

Become an inquiring practitioner by undertaking research in an area of your practice, culminating in the production of a 12-15,000-word dissertation

## 

### Year 1

In your first year, you'll study the compulsory module Research Methodologies and Reasoning. Delivered online in the evening, this module will introduce you to the theory and practice of research in education and equip you with the skills required to undertake your dissertation in Year 2.

Depending on your prior PGDE credits, you might also study an optional module chosen from a wide range of classes in such areas as inclusion, health and wellbeing, or digital education. Modules run in the evenings or on Saturdays, and some are taught entirely online, meaning that you can gain a master's level qualification while still working.

## Dissertation

In year 2, you'll commence a research project in an area of your own practice. The project can be empirical or desk-based, and it will be written up in the form of a 12-15,000-word dissertation. Throughout the project you'll be supported by a supervisor who will guide you in the processes of carrying out the research and writing up its findings. The dissertation is an opportunity to become an inquiring practitioner by pursuing an aspect of your professional practice towards a research-informed conclusion.

## 

24 to 60 months part time

## 

PGDE qualification gained within the last five years

January 2024 start date available. Visit www.strath.ac.uk for full details.

## POSTGRADUATE CERTIFICATE IN EDUCATION (INTERNATIONAL)

PgCert (online)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Learn and apply innovative teaching practices in your own classroom

Develop a deeper understanding of reflective practice in teaching

Benefit from flexibility and choice suiting your own interests

Opportunity to undertake a small-scale practitioner enquiry project

## 

## **Compulsory Classes**

- International Education: Issues, Debates and Challenges
- Learning, Teaching and Professionalism in International Contexts
- Practitioner Enquiry for Professional Learning

The programme also offers a route into a full Masters degree and a research-orientated career.

## 

12 months part-time (delivered online)
Entry dates: September and January

## 

Undergraduate degree with at least a 2:1 or degree lower than this with professional experience working in an education-related setting.

Applicants will already be working in an educational setting as teaching assistants, teachers, Head of Department, Senior Managers or other professional roles.

January 2024 start date available. Visit www.strath.ac.uk for full details.

## EDUCATION STUDIES /////////

## MEd

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Apply your learning as you study to improve your practice

Gain recognition for continuing professional development

Undertake individual classes and use credits from prior learning towards a Masters qualification

## 

This programme allows you to tailor your studies through a choice of classes guided by your Advisor of Studies. Under the Education Studies framework, specialist pathways include:

- Educational Leadership
- Philosophy with Children (only such course in the UK)
- Supporting Teacher Learning (GTCS Recognition)
- Inclusive Education (GTCS Recognition)
- Health and Wellbeing
- Digital Education

## Year 1

Three classes, typically one per semester. Some classes are taught fully online, while others involve a blend of distance and face-to-face learning. Face-to-face sessions involve attending occasional on campus days (Saturdays). Distance learning sessions involve participation in a weekly online seminar. These are scheduled in the evening to accommodate working professionals. Students who decide to complete their studies after one year will graduate with a Postgraduate Certificate.

## Year 2

Two optional classes and a compulsory class, which are taken over a period broadly similar to the three school terms. The compulsory class, Research Methods and Reasoning, is delivered entirely online. Students who decide to complete their studies at the end of Year 2 will graduate with a Postgraduate Diploma

## 

Following the Postgraduate Diploma you can undertake a research dissertation in a subject area of your choice. We will match you to an appropriate supervisor to provide one-to-one support. Your dissertation can be completed via distance learning to provide flexibility.

## THE DEPARTMENT OF GOVERNMENT AND PUBLIC POLICY

## **RESEARCH DEGREES**

PhD/MPhil in European Public Policy or Politics



## **Contact for Research Degrees**

e: hass-postgrad@strath.ac.uk

Prospective research students should consult individual staff research profiles on our website and are encouraged to contact potential supervisors in advance of their application.

The Department of Government and Public Policy has a long history of international research excellence. The quality of our research is recognised internationally – for example, the German Centre for Higher Education Development (CHE) lists the Department as part of an 'Excellence Group' in political science.

We are one of the founding members of the European Consortium for Political Research, the largest organisation of its kind in European political science.

We have a strong research culture that focuses on individual and team-based research. In the 2021 Research Excellence Framework (REF) we were rated first place in the UK by the Times Higher Education. We host two research centres:

- European Policies Research Centre
- Centre for Energy Policy

Our research is supported by grants from a range of funding bodies, including research councils, national governments and international bodies, such as the OECD and the EU.

## **Research Activities**

The research activities of the Department are grouped in four broad interlocking priority areas:

## **Elections and Representation**

The Department has a strong track record in the study of voting behaviour, political attitudes, social media, political behaviour and political parties, and is one of the leading centres of quantitative political science in the UK.

- Public attitudes on the EU referendum and on Scotland's independence referendum and broader British and Scottish social attitudes
- The impact of social media on attitudes towards Scottish independence
- A global examination of how corruption affects political participation, trust and popular support for government

- A comparative examination of the attitudes, backgrounds and experiences of parliamentary candidates
- The impact of cohesion policy on EU administrative capacity building in Europe
- Maximising synergies between European Structural and Investment Funds and other EU Instruments
- A central framework for quantitative text analysis in Europe
- The effect of domestic politics on EU policy-making and institutional reform
- Voter attitudes towards disabled election candidates
- The impact of social media on fake news sharing and believing
- Energy saving innovations and economy-wide rebound effects
- Impacts of policy changes on climate change modelling
- The political economy of growth and institutional reform

## **Public Policy**

In addition to the public policy expertise of the European Policies Research Centre, researchers in the Department analyse the conditions that contribute to policy success, policy learning and policy transfer, EU policy-making, public policy in post-devolution Scotland and the territorial impact of public policy.

## **Governance and Institutions**

The Department has an established international profile in the study of parliaments in Scotland, the UK, and Europe. Staff also specialise in the study of Youth Parliaments, the European Commission and EU policymaking, multi-level governance and devolution, and the politics of nationalism, regionalism and localism.

## **International Relations**

The Department also has grown International Relations research in areas including: war, terrorism and civil conflict, human rights, international political economy, international institutions and global governance, international security, international law, global arms trade, the role of NGOs in international relations, the politics of the anti-globalisation movement and feminist theory.

Across all four areas staff have recently been engaged in a number of major government, European Union, and research council-funded projects including:

- Public attitudes on the EU referendum and on Scotland's independence referendum and broader British and Scottish social attitudes
- The impact of social media on attitudes towards Scottish independence

- A global examination of how corruption affects political participation, trust and popular support for government
- A comparative examination of the attitudes, backgrounds and experiences of parliamentary candidates
- The impact of cohesion policy on EU administrative capacity building in Europe
- Maximising synergies between European Structural and Investment Funds and other EU Instruments
- The effect of domestic politics on EU policy-making and institutional reform
- Voter attitudes towards disabled election candidates
- The impact of social media on fake news sharing and believing
- Energy saving innovations and economywide rebound effects
- Impacts of policy changes on climate change modelling
- The political economy of growth and institutional reform
- A central framework for quantitative text analysis in Europe
- Evaluating the equity and availability of Scotland's electrical vehicle networks
- Using video game technologies to enhance urban design and to engage UK citizens and stakeholders
- Analysing the high-tech competitiveness of UK firms and industry using indicators of economic performance, knowledge production, and web scraping
- Domestic conflict and public support in the UK for ambitious climate policy
- The politics of science in international climate cooperation
- The credibility of climate pledges by firms
- The impact of domestic politics and preferences on EU policy-making and institutional reform

## POSTGRADUATE TAUGHT COURSES

- Data Science for Politics and Policymaking
- International Relations
- Political Economy
- Political Research
- Politics
- Public Policy
- · Technology Policy and Management
- · Urban Policy and Analysis

Prospective students interested in international relations/security may also be interested in the MSc Diplomacy and International Security (see page 106 for course description).

## **Contact for Postgraduate Taught Courses**

e: studywithus-hass@strath.ac.uk

## 

## MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop the skills to use big data to solve complex political and social problems

Understand the mechanics behind capturing and organising large amounts of data

Undertake a research or client-based project

## 

The course comprises compulsory and optional classes and a research or client-based project dissertation. It is delivered in collaboration with the Department of Computer and Information Sciences.

## **Compulsory Classes**

- Big Data Technologies
- Legal Ethical and Professional Issues for the Information Society
- Machine Learning for Data Analytics
- Database Fundamentals

Students with no quantitative methods experience:

Quantitative Methods 1

Students with quantitative methods experience:

Ouantitative Methods 2

## **OR**

Qualitative Methods

Other advanced methods classes may be chosen if offered and approved by course director

## **Optional classes:**

Students also choose two optional classes, either:

Perspectives on Social Research

## **AND**

Welfare Concepts and Ideas

## OR

Principles of Research Design

## AND

Policy Analysis

## 

12 months full-time; 24 months part-time

## 

First- or upper second-class Honours degree, or overseas equivalent, in social science.

EThe course has helped me gain exposure to various real-world applications of data science, from simple data handling to building complex machine learning models. Studying at Strathclyde has affirmed my desire to utilise big data to make a positive impact in society and drive meaningful change.

## Vasilii Allenov

Data Science for Politics & Policy-making (MSc), Student

January 2024 start date available. Visit www.strath.ac.uk for full details.

## INTERNATIONAL / RELATIONS ////////

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain grounding in the analysis of international relations

Combine training in different theoretical and methodological approaches

Examine the theories and research designs for the study of conflict, peace, security and cooperation

Taught by international scholars

## 

The course comprises compulsory and optional classes and a research project dissertation or a placement dissertation with industry, third sector, or government.

## **Compulsory Classes**

- International Institutions and Regimes
- Debating International Relations Theory
- · Principles of Research Design
- Contemporary International Relations

## **Optional Classes**

Students also choose two optional classes. The range of classes is subject to change but will normally include:

- Feminism and International Relations
- · European Governance
- Comparative Political Economy
- Law of the World Trade Organisation
- International Environmental Law
- Comparative Political Institutions
- · Diplomacy: Evolution, Theory and Practice
- Embassies in Crisis
- Oualitative Methods
- Quantitative Methods 1
- Quantitative Methods 2
- Contemporary Security Challenges and Responses

## 

12 months full-time; 24 months part-time

## 

First- or upper second-class Honours degree, or overseas equivalent, in social science.

## POLITICAL Research

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop skills in empirical political science

Explore different methodological approaches and their application to real-life political problems

Gain transferable employability skills in research design

## 

The course comprises compulsory and optional classes and a research project dissertation or a placement dissertation with industry, third sector, or government.

## **Compulsory Classes**

- Principles of Research Design
- · Qualitative Methods
- Quantitative Methods 1
- Quantitative Methods 2

## **Optional Classes**

Students also choose two optional classes. The range of classes is subject to change but will normally include:

- European Governance
- Comparative Political Economy
- Policy Analysis
- Comparative Political Institutions
- Debating International Relations Theory
- Contemporary International Relations
- Feminism and International Relations
- International Institutions and Regimes
- Contemporary Security Challenges and Responses

## 

12 months full-time; 24 months part-time

## 

First- or upper second-class Honours degree, or overseas equivalent, in social science.

## 

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain advanced understanding of the study of politics

Learn to design and conduct research projects in political science

Benefit from the input of guest lecturers and visiting academics

## 

The course comprises compulsory and optional classes and a research project dissertation or a placement dissertation with industry, third sector, or government.

## **Compulsory Classes**

- Principles of Research Design
- Qualitative Methods OR Quantitative Methods 1

## **Optional Classes**

Students also choose four optional classes. The range of classes is subject to change but will normally include:

- · Feminism and International Relations
- European Governance
- Comparative Political Economy
- Contemporary International Relations
- Debating International Relations Theory
- International Institutions and Regimes
- Comparative Political Institutions
- Comparative Public Policy
- Quantitative Methods 1
   (if not chosen from list above)
- Quantitative Methods 2
- Qualitative Methods (if not chosen from list above)
- Contemporary Security Challenges and Responses

## 

12 months full-time; 24 months part-time

## 

First- or upper second-class Honours degree, or overseas equivalent, in social science.

January 2024 start date available. Visit www.strath.ac.uk for full details.

## 

## WHY STUDY THIS PROGRAMME AT

Explore various conceptual and methodological tools and their connections to real-world problems

Gain a range of useful research and analytic skills

Freedom in dissertation topic to focus on any area of public policy

## 

The course comprises compulsory and optional classes and a research project dissertation or a placement dissertation with industry, third sector, or government.

## **Compulsory Classes**

STRATHCLYDE?

- Policy Analysis
- Theories and Practices of Regulation and Governance

In addition, two classes must be chosen from the following four:

- Comparative Public Policy
- Oualitative Methods
- Ouantitative Methods 1
- Policy Analysis: Problem Structuring Methods

## **Optional Classes**

Students also choose two optional classes. The range of classes is subject to change but will normally include:

- Ouantitative Methods 2\*
- International Institutions and Regimes
- European Governance
- Comparative Public Policy \*\*
- Contemporary Security Challenges and Responses
- Debating International Relations Theory
- \* With appropriate prerequisite.
- \*\* If not taken as a compulsory module.

## 

12 months full-time; 24 months part-time

## 

First- or upper second-class Honours degree, or overseas equivalent, in social science.

## 

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain a thorough, Masters-level understanding of the relationship between political systems, institutions and economic markets

Analyse pressing issues such as social inequality, political polarisation, the functioning of domestic and international institutions, climate change and globalisation

Gain skills in big data visualisation and analysis, quantitative econometric and qualitative analytical skills

Become equipped with the necessary training to work in a variety of analytical and research roles across public and private sectors

## 

The course comprises compulsory and optional classes and a research project dissertation or a placement dissertation with industry, third sector, or government.

## **Core compulsory classes:**

- Quantitative Methods I
- · Quantitative Methods II
- · Comparative Political Economy
- International Political Economy
- + a further 40 credits worth of classes from the following:

## **First Semester**

- Policy Analysis
- Principles of Research Design
- Comparative Political Institutions

## **Second Semester**

- International Institutions and Regimes
- European Governance
- · Comparative Public Policy
- · Contemporary International Relations

## 

12 months full-time; 24 months part-time

## 

First or upper second-class Honours degree, or equivalent, in social science.

## TECHNOLOGY POLICY AND MANAGEMENT

## MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Benefit from the collective expertise of Strathclyde Business School, the Faculty of Science and the Faculty of Humanities & Social Sciences. This is a new, truly multidisciplinary Masters degree

Uniquely aligned with Glasgow City Innovation District (GCID) to maximise your opportunity to engage with business

The only taught programme in Scotland, and one of only a few globally, that places a focus on policy formulation, analysis and communication in relation to the management of innovation and technology

## 

The course comprises compulsory and optional classes and a research project dissertation or a placement dissertation with industry, third sector, or government.

## **Compulsory Classes**

- · Big Data Fundamentals
- Systems Thinking and Modelling
- · Systems Engineering Concepts
- Legal, Ethical and Professional Issues in the Information Society
- · Management of Innovation
- Business Analysis
- Project Management
- Environmental Impact Assessment

## **Optional Classes**

Students also choose two optional classes. The range of classes is subject to change but will normally include:

- Comparative Political Institutions
- Theories and Practices of Regulation and Governance

## 

12 months full-time

## 

Upper second-class Honours degree, or overseas equivalent, in an Engineering or Science discipline including the physical or natural sciences and informatics. Previous working experience will also be considered but will not compensate for academic performance. Entry requirements may be widened to include other professional backgrounds and qualifications from social sciences or humanities given relevant mathematical or design-relevant course work.

## URBAN POLICY AND ANALYSIS

## **MSc**

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Focus on major urban opportunities and issues

Develop knowledge and skills to lead the design and delivery of sustainable city strategies

Undertake a research or client-based project

Learn from staff with expertise across multiple disciplines

## 

There are two track you can choose to specialise, to: 'Sustainability' or 'Infrastructure':

## **Compulsory Classes**

- Quantitative Methods 1
- Comparative Political Economy
- Levelling Up: A Guide to the New Regional and Industrial Policies\*
- Networked Institutions, Infrastructure and Technology\*

\*Please note that these classes are subject to change. Please check our website for an up-to-date list of classes.

## **Sustainability Track Compulsory Classes:**

- Environmental Impact Assessment
- Circular Economy and Transformations Towards Sustainability

## **Infrastructure Track Compulsory Classes:**

- · City Systems and Infrastructure
- · Quantitative Methods: Statistics and Analysis

## **Optional Classes**

Choose from classes across the University to develop skills in specific areas.

## 

12 months full-time; 24 months part-time

## 

Upper second-class Honours degree, or overseas equivalent, in a relevant subject. Applications are also welcome from candidates with strong career experience in a relevant field.

## THE DEPARTMENT OF HUMANITIES

## **RESEARCH DEGREES**

MPhil/PhD in Creative Writing, English, Journalism, Gender Studies, History, French, Spanish, Italian or Translation Studies

MRes in Creative Writing, English, Journalism, History, French, Spanish or Italian

## 

## **Contact for Research Degrees**

e: hass-postgrad@strath.ac.uk

Prospective research students should consult individual staff research profiles on our website and are encouraged to contact potential supervisors in advance of their application.

The Department of Humanities is a community of researchers, teachers, students and support staff working together on some of the most interesting and exciting issues in historical and contemporary culture. The quality of our research has a strong national and international reputation.

Our postgraduate courses cover a wide range of areas, from the teaching of high-level skills in language, through advanced practical study in creative writing and journalism, to research-led courses at the cutting edge of their academic disciplines in the study of history, literature, language, and culture.

The Department is home to the following centres:

## Centre for the Social History of Health and Healthcare

A collaborative research group involving historians and students from the University of Strathclyde and Glasgow Caledonian University; activities focus on the ways in which medicine, medical science and healthcare systems have developed over time and have come to shape our contemporary experience.

## **British Animal Studies Network**

Animals are present in many areas of human lives: as workers, objects for scientific inquiry, characters in stories, images, companions, food. To analyse the human relationship with and perception of animals therefore requires interdisciplinary work, which is enabled by the network. We also supervise PhD and Masters students in animal studies.

## Scottish Centre for Victorian and Neo-Victorian Studies

The Centre promotes the study of Victorian literature, culture and history in Scotland. We are a joint organisation between the Universities of Strathclyde, Glasgow and Stirling, as well as libraries and archives with an interest in the Victorian period. At Strathclyde, we also supervise PhD and Masters students in Victorian literature, culture and history.

## **Scottish Oral History Centre (SOHC)**

The SOHC has an international reputation as a research and knowledge exchange hub. Since 1995 it has been involved in teaching, research, training and outreach activities around the theory and practice of oral history. SOHC staff are involved in a series of oral history-based research projects, run an Advanced Oral History Masters class and supervise a wide range of dissertations and PhD students.

## Research areas

- Scotland and the world
- · European and international history
- · History of science and technology
- · History of health and medicine
- Oral history
- Translation studies
- · Literary linguistics
- · Victorian literature and culture
- 20th century literature
- Creative writing
- Animal studies
- · Gender and sexuality in media, literature and culture
- Politics, publics and activism
- · Science, technology, health and environment
- Social media
- Violence and conflict
- Intelligence studies
- · Conflict resolution in international relations
- Francophone, Italian, and Hispanic studies

## **POSTGRADUATE TAUGHT COURSES**

- Applied Gender Studies
- Applied Gender Studies (Research Methods)
- Applied Translation and Interpreting
- Creative Writing
- Digital Journalism
- Diplomacy and International Security (in collaboration with the Department of Government and Public Policy and the Strathclyde Law School)
- Interdisciplinary English Studies
- Media and Communication
- Health History
- Historical Studies
- TESOL and Intercultural Communication (taught jointly with the Strathclyde Institute of Education)

## **Contact for Postgraduate Taught Courses**

e: studywithus-hass@strath.ac.uk

## PROGRAMMES // IN HUMANITIES

**MRes** 

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Combine research and instructional classes

Gain key research skills, experience and training

Study opportunities across a wide spectrum of subjects

Opportunity to progress to a PhD programme

Benefit from the guidance of an academic supervisor

The MRes (Masters by Research) combines research in a dissertation and instructional classes, with an emphasis on providing basic research skills, experience and training. It is offered across a wide spectrum of subjects. The MRes (and MPhil) are independent postgraduate degrees and can serve as stepping-stones to the PhD programme. The MRes degree provides an alternative entry-point to academic research for those who are not yet sure what topic they wish to research, or who require training in new skills before they can embark on doctoral work.

## 

12 months full-time; 24 months part-time

## 

A first-class or upper second-class Honours degree (or overseas equivalent) in the relevant or appropriate related subject.

## **MRes Creative Writing**

This course enables students to work on a substantial piece of writing with a successful, published writer for one year (full-time) or two years (part-time), specialising in your chosen form, such as poetry, fiction, creative non-fiction, or screenwriting. Working closely with one supervisor rather than with a group means the course can adapt to your personal interests. The main element of the MRes is a dissertation of around 30,000 words (or equivalent), which includes a critical or craft essay of around 5,000 words. Students also undertake a research skills class to equip them for advanced academic research and further creative practice.

## **MRes English**

The MRes provides research skills, experience and training in support of a lengthy piece of written research. Students wishing to undertake the MRes in English can study in a number of areas, related to the research specialisms of academic staff.

Our areas of research strength include Victorian, gender, sexuality and queer theory, Scottish studies, animal studies, Renaissance, life writing, linguistic and cognitive literary studies. race, migration, travel writing and (post)colonial studies.

Students prepare a 30,000 word dissertation and undertake the class Research Skills in Literature, Culture and Communication.

## **MRes History**

Students work on their chosen topic under close supervision by a member of staff. The main element of the MRes is a dissertation of not more than 30,000 words. In addition, students take a number of taught classes, including research skills, sources and methods for historians, depending on their field of research. Optional classes include Palaeography, Quantitative Methods, Qualitative Methods and Oral History.

The taught skills classes provide the training needed to complete a substantial piece of research and lay the foundation for further study.

## **MRes Journalism**

Students wishing to undertake a MRes in Journalism should consult the wide-ranging interests of academic staff, which are organised under four major research clusters: Gender; Science, Health & Environment; Politics, Publics & Activism; and Violence & Conflict. Within this we have particular interests in the global issue of (micro) plastics pollution, gender based violence, cyberbullying, digital storytelling, gender and politics, body image and mental health, social media, social network analysis, media and national identity, feminist activism, inequalities in the media industries. Students prepare a 30,000 word dissertation and undertake a research training class.

## MRes French, Italian or Spanish

(note you can also combine two languages)

Students undertaking the MRes in Modern Languages can study in a number of areas and languages, related to the research specialism of academic staff in Modern Languages. Our areas of expertise include Francophone, Italian and Hispanic literature, cinema and culture, Translation Studies, eco criticism, colonial and post-colonial studies. In parallel to developing their research skills and experience through taught classes, students work under close supervision on a 30,000 word dissertation.

## APPLIED ///////////GENDER STUDIES

## MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop analytical and practical skills to engage critically with contemporary gender issues

Undertake research placements with organisations from the feminist third sector and organisations committed to gender equality in education, arts, culture and sport

## 

## **Compulsory Classes**

- · Understanding Gender
- · Feminist Knowledge, Feminist Research
- Feminisms Continuity and Change

## **Optional Classes (indicative, one per semester)**

- Gender Studies Research Placement
- Advanced Topics in Gender Studies
- Gender, Health and Modern Medicine
- Global Queers: Travel Writing and Sexual Politics
- Advanced Oral History
- Medicine, Health and the Moving Image
- Fleshy Histories: Meat Eating and Meat Avoidance, 1500 to the Present
- Understanding Gender and Sexuality in Education

## **Masters Students Only**

Dissertation

## 

12 months full-time; 24 months part-time

## 

First- or second-class Honours degree, or overseas equivalent, in a relevant discipline, usually in the Humanities and Social Sciences. Applicants with relevant experience (paid or voluntary) in feminist, queer or equalities work will also be considered.

## APPLIED GENDER STUDIES (RESEARCH METHODS)

## MS

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Benefit from the opportunity to engage with the unique archival collections at Glasgow Women's Library

Gain skills to design and conduct advanced research projects in Social Sciences

Develop an understanding of key feminist debates

## 

## **Compulsory Classes**

- Feminist Knowledge, Feminist Research
- Advanced Topics in Gender Studies
- Perspectives on Social Research
- Quantitative Methods
- Qualitative Methods

## **Optional Classes (indicative, one per semester)**

- · Gender Studies Research Placement
- · Gender, Health and Modern Medicine
- Feminisms Continuity and Change
- Medicine, Health and the Moving Image
- Fleshy Histories: Meat Eating and Meat Avoidance, 1500 to the Present
- Understanding Gender and Sexuality in Education

## **Masters Students Only**

Dissertation

## 

12 months full-time; 24 months part-time

## 

First- or second-class Honours degree, or overseas equivalent, in a relevant discipline, usually in the Humanities and Social Sciences. Applicants with relevant experience (paid or voluntary) in feminist, queer or equalities work will also be considered.

## APPLIED TRANSLATION ////AND INTERPRETING /////

## MSc/PgDip

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain practical experience through applied activities on an engaging, industry-focused and skills-building course

Boost employability by participating in the RWS Trados Campus programme

Option to pursue a research pathway toward PhD study

## 

## Compulsory Classes

- · Translation and Interpreting Studies
- Professional Interpreting Practice
- Interpreting for Business and Commerce
- Business Translation

## **Optional Classes (indicative, one per semester)**

- Translation Industry Placement
- · Text Typology and Specialised Translation
- Translation and Language Technology
- · Translation and Media
- Translating for the Travel & Tourism Industry

## **Masters Students Only**

• Dissertation or Translation/Interpreting Project

## 

MSc: 12 months full-time PgDip: 9 months full-time

## 

First- or upper second-class Honours degree, or overseas equivalent. An academic background in English or translating is not required. Applicants with a lower degree classification may be considered on an individual basis.

Suitable applicants are required to pass an aptitude test prior to admission, comprising a written translation test. This may be followed by an oral interview to further demonstrate your language proficiency. The oral interview can be conducted face-to-face or online, according to circumstances.

We currently admit students who can master another language in addition to English, from the following: Arabic, Chinese, French, Italian and Spanish.

## **CREATIVE** WRITING

## **MLitt**

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Benefit from workshops and develop your ideas with peers, and professional, published writers

Work on an extended creative project developed on a one-to-one basis with your supervisor

Prepare for the practical and professional side of the writing life

## 

## **Compulsory Classes**

- The Shape of Stories 1
- Research Skills in Literature, Culture, and Communication
- The Writing Life
- The Made Project
- The Shape of Stories 2

## **Optional Classes (indicative)**

- English and Creative Writing Research Placement
- The Writer's Studio
- Fleshy Histories: Meat Eating and Meat Avoidance, 1500 to the Present
- · Queer and Anticolonial Health

## **Masters Students Only**

The Major Project (dissertation, 60 credits)

## 

12 months full-time; 24 months part-time

## 

Upper second-class Honours degree, or overseas equivalent, in any subject, plus a portfolio of creative writing.

This should include one of the following: 2,000 words of prose (fiction or creative non-fiction), or up to 10 poems (no more than 40 lines in length), or a fifteenpage screenplay; and an outline of the creative work you might develop during the degree (no more than two A4 pages).

## 

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain the skills to produce multimedia news and features

Learn how to devise, launch, produce and market an online publication

Work in the University's simulated news environment and report externally using mobile media

## 

## **Compulsory Classes**

- · Multimedia Journalism
- Producing Media
- Scots Law for Journalists
- Media Ethics

## **Optional Classes (indicative)**

- Communication and Media Theory in an International Context
- Digital Skills for Media and Communication
- Strategic Communication
- Entrepreneurial Journalism and Innovation
- Media and Health

## **Masters Students Only**

Academic Dissertation or Production Dissertation

## 

12 months full-time; 24 months part-time

## 

Honours degree, or overseas equivalent, or professional experience demonstrating ability to study at Masters level. Experience of student journalism, a media work placement, freelance work or professional journalism is desirable.

## DIPLOMACY AND INTERNATIONAL SECURITY

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Deepen your understanding of contemporary and historical issues relating to diplomacy and security

Gain transferable employability skills for a range of careers

Benefit from a unique multidisciplinary experience by selecting optional classes from history, politics and/or law

Suitable for applicants from a range of backgrounds, including humanities, social sciences, law, and business

## 

## **Compulsory Classes**

- Diplomacy: Evolution, Theory, and Practice
- Embassies in Crisis
- Research Skills, Sources and Methods

## **Optional Classes (indicative)**

- Diplomacy and Conflict Resolution in the Arab-Israeli Dispute
- Contemporary Security Challenges and Responses
- Diplomacy, Strategy and Alliance
- Contemporary International Relations
- The Global Cold War and Africa
- International Human Rights Law
- · International Institutions and Regimes

## **Masters Students Only**

Dissertation

## 

12 months full-time; 24 months part-time

## 

First- or upper second-class Honours degree, or overseas equivalent, in humanities, social sciences/law subjects or substantial professional experience.

Representative for MSc
Diplomacy and International
Security. In this role, I acquired
various practical skills,
such as gathering feedback,
communication, and organisation
skills, and learned how to
build collaborative working
relationships, gaining the trust
and confidence of my peers.

## **Mhairi McClafferty**

Diplomacy & International Security (MSc), Student

## INTERDISCIPLINARY ENGLISH STUDIES

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Opportunity to take your studies to a more specialised level or in a new direction

Find connections between literary studies and other academic disciplines

Benefit from the guidance of an expert supervisor

## 

## **Compulsory Classes**

 Research Skills in Literature, Culture and Communication

## Optional Classes (indicative, five to be chosen)

- Global Queers: Travel Writing and Sexual Politics
- Intro to Intercultural Communication
- Narrative Processing across Languages and Cultures
- Visions of Suburbia
- Contemporary Scottish Cultural Studies
- Transcultural Fandom and British Popular Culture
- Fleshy Histories: Meat Eating and Meat Avoidance, 1500 to Present
- Children's Literature and the Four Nations
- English and Creative Writing Research Placement

## **Masters Students Only**

Dissertation

## 

12 months full-time; 24 months part-time

## 

First- or upper second-class Honours degree, or overseas equivalent, in English literature or a related subject.

January 2024 start date available. Visit www.strath.ac.uk for full details.

## 

MLitt

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop expertise to support a career in corporate communications, public relations, or academic research into these areas

Learn to apply media and communication theories across international contexts and media platforms

## 

## **Compulsory Classes**

- Research Skills in Media and Communication
- Communication and Media Theory in an International Context
- From Broadcast to Participation: a History of Mediation
- Strategic Communication
- Dissertation

## **Optional classes (indicative):**

- Digital Skills for Media & Communication
- Media & Health
- · Communicating Science & the Environment
- · Entrepreneurial Journalism & Innovation
- Media Ethics
- Advanced Readings

## 

12 months full-time; 24 months part-time Entry dates: September and January

## 

First- or upper second-class Honours degree, or overseas equivalent, in Media and Cultural Studies, English Studies, or a related discipline. Other qualifications may be considered.

# **HEALTH HISTORY**

MSc/PgDip/PgCert

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop your understanding of a range of issues, debates, and specialist topics in the history of health and medicine

Join and engage with an internationally-recognised community of scholars at the Centre for the Social History of Health and Healthcare (CSHHH)

Develop your transferable skills for a range of spheres of employment

Apply historical understandings to contemporary issues regarding health, medicine and society

Suitable for those from humanities, social science and health science backgrounds

# 

# **Compulsory Classes**

• Research Skills, Sources and Methods for Historians

# Optional Classes (indicative, five to be chosen)

- Health and Healthcare in the Long Nineteenth Century
- Pharmaceuticals, Ethics and Health, 1800 1980
- · Media and Health
- Advanced Oral History
- Medicine and Warfare, 1800-2000
- · Gender, Health and Modern Medicine
- Medicine, Health and the Moving Image
- Governing Highs and Health: History and the Control of Drugs, c.1800-c.1945
- Fleshy Histories: Meat Eating and Meat Avoidance, 1500 to the Present
- Work Placement in History
- Food and Health in the West during the Twentieth Century
- Organic Machines, Engineered Environments and Hybrid Natures

Note: Students may also take one of the modules in the MSc Historical Studies options.

# **Masters Students Only**

Dissertation

# 

MSc: 12 months full-time; 24 months part-time PgDip: 9 months full-time; 21months part-time PgCert: 4 months full-time; 9 months part-time

# 

First or upper-second class Honours degree or overseas equivalent, in history or a related discipline.

# HISTORICAL STUDIES ////////

# MSc/PgDip

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Deepen your historical knowledge, understanding and awareness

Assess historical themes and historiographical interpretations across a broad chronological range

Develop transferable skills necessary for employment

# 

# **Compulsory Classes**

 Research Skills, Sources and Methods for Historians

# **Optional Classes**

- Britain, France and the United States,1945-1958: Diplomacy, Strategy and Alliance
- Nationalism and Nation-states in the Arab Middle East, 1900-1945
- Advanced Oral History
- Palaeography, c1500-c1800
- Race, War and Colonialism: France 1914-44
- War, Sacrifice and the Nation in Europe, 1789-1918
- Plantations by Land and Sea: British imperial projects in the Atlantic and Indian Oceans, c. 1590-1720
- Segregation, Migration and War: African-Americans 1910-1930
- Scotland and Ulster in the Early Modern North Atlantic World
- Setting Europe Ablaze: Resistance Movements in the Second World War
- Work Placement in History
- Ireland, Colonialism and Anti-colonialism
- Organic Machines, Engineered Environments, and Hybrid Natures
- Diplomacy and Conflict Resolution in the Arab-Israeli Dispute
- Red Continent: Africa and the Global Cold War

Note: Not all classes will be on offer in any one year.

# **Masters Students Only**

Dissertation of 15,000 words

## 

MSc: 12 months full-time; 24 months part-time PgDip: 9 months full-time; 21 months part-time

# 

First- or upper second-class Honours degree in history, or equivalent.

# THE STRATHCLYDE LAW SCHOOL

### **RESEARCH DEGREES**

MPhil/PhD Law

# **Contact for Research Degrees**

e: hass-postgrad@strath.ac.uk

Strathclyde Law School has established a reputation of more than 50 years for quality teaching and research. We offer flexible learning including options for parttime study, accelerated study and distance learning.

Ranked third in Scotland both overall and for student satisfaction. Strathclyde Law School is committed to providing our students with a high-quality and useful education (CUG, 2024). We host Scotland's biggest Law Clinic, which is run by an Executive Committee of students and chaired by a Clinic Director. The Clinic provides a 'real life' learning experience for students, enhancing their professional skills. It is an invaluable service to members of the public who do not qualify for legal aid but cannot afford to pay legal fees. The Strathclyde Law School also hosts the Mediation Clinic, providing postgraduate students with a unique opportunity to mediate alongside experienced practitioners. The Clinic receives cases from several local courts including Glasgow Sheriff Court, Scotland's largest, and has just launched a new Housing Mediation Project.

The Strathclyde Law School hosts several centres of excellence including One Ocean Hub, a £13m project on the intersection of human rights and environmental law in oceans governance, connecting our legal expertise with scientists and policymakers globally. The School also hosts several research centres, which provide a welcoming and supporting environment for our research students.

# **Research Areas**

With 83% of our research being recognised as 'internationally excellent' (REF 2021), Strathclyde Law School delivers high-quality research with real-world impact. Many colleagues consult for governments, parliaments and global regulatory bodies, and the School offers particular strengths in environmental, socio-legal, professional and regulatory research. We can offer supervision in the following areas:

- Access to Justice and the Provision of Legal Services – including legal profession; the use of forensic science and expert evidence in legal proceedings; the role of the jury; and the role of law clinics in teaching ethical awareness.
- Constitutional and Administrative Law including most areas of domestic public law and comparative public law.
- Dispute Resolution empirical research into mediation policy and practice.
- Environmental Law and Governance including emerging areas of legal research in environmental governance with a strong development focus.
- Human Rights includes gender and rights, constitutional dimensions of human rights protection, migrants' rights, child care and protection in the context of the right to respect for private and family life, the prohibition of torture, freedom of expression, and human rights dimensions of environmental governance.
- Gender, Sexuality and the Law including sex work, reproductive rights, women and the law, feminist legal theory, and gender recognition.
- Law, Crime and Justice including criminal justice decision-making; children & young people; defence work; miscarriages of justice; prisons; security, policing & counter-terrorism; sentencing & punishment.
- Scottish Private Law including family law, bio-ethics and personhood, child law and child protection, sexual orientation and same-sex families, and history of Scots private law.
- Technology Law and Regulation including Intellectual Property Law, Data Protection, Human Rights, Competition, Sector-Specific Regulation, and the governance of the Internet, Al, Autonomous Systems 3D printing and Fintech.

- - International and EU Migration Law and Governance.
  - Competition Law
  - EU and UK Labour Law
  - Public International Law
  - EU External Relations
  - Law and Society
  - Finance Law
  - Medical Law and Ethics

Prospective research students should consult individual staff research profiles on our website and are encouraged to contact potential supervisors in advance of their application.

# **PRE-QUALIFICATION LAW COURSES**

• LLB Law (Graduate Entry)

# **POSTGRADUATE TAUGHT COURSES**

- Construction Law
- Criminal Justice and Penal Change
- Diploma/LLM in Professional Legal Practice
- Global Environmental Law and Governance
- Human Rights Law
- International Commercial Law
- Law
- Mediation and Conflict Resolution
- Competition Law

# Contact for Postgraduate Taught Courses

e: studywithus-hass@strath.ac.uk

January 2024 start date available. Visit www.strath.ac.uk for full details.

# 

# LLM/PgDip/PgCert

(on campus; distance learning online available)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Construction professionals develop knowledge of the law required for practical application

Lawyers gain legal expertise relating to management of construction projects

Full-time and part-time study options

In-person and and new online, distance learning versions available for LLM students

## 

Construction Law offers both an in-person and online version, with both versions offering the same content, with a mix of pre-recorded and live online lectures available. Students will also have access to a wide range of electronic information sources.

### **Compulsory Classes**

- Context of Construction (for Law graduates)
- Legal Process and the Law of Contract and Other Obligations (for non-Law graduates)
- Law of the Construction Industry
- Law and Practice of Construction Management
- Construction Dispute Resolution
- Legal Research (LLM and PgDip)

Students also select one optional class from other Strathclyde Law School Masters programmes.

### **LLM Students Only**

Dissertation

# 

LLM: 12 months full-time\*; 24 months part-time\* PgDip: 9 months full-time; 18 months part-time PgCert: 8 months part-time

# 

First- or upper second-class Honours degree, or overseas equivalent, in a related discipline. Where an applicant has a lower second-class Honours degree in a relevant discipline, admission may be possible with suitable professional qualifications and/or considerable appropriate experience.

\*Please note that the LLM Construction Law will now be offered either on campus or online.

# CRIMINAL JUSTICE AND PENAL CHANGE

LLM/MSc/PgDip/PgCert

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Draw on a range of disciplinary approaches, to develop a rational and just response to crime

Full-time, part-time and evening study options

Learn from world experts in the fields of policy and practice

# 

As well as seminars, you'll learn through role play, and simulations. An active programme of events on contemporary problems and visits to criminal justice agencies will help to stimulate your learning.

### **Compulsory Classes**

- Criminal Justice and Penal Decision-Making
- Punishment and Processes of Penal Change
- Legal Research (LLM/MSc/PgDip)

# Students also choose classes from other Law Masters programmes from a list which may include (subject to change):

- · Childhood and Crime
- International Criminal Justice
- Homicide
- Surveillance, Technology and Crime Control
- Restorative Justice

Participants may also choose classes from other Strathclyde Law School Masters programmes, such as Human Rights Law, Internet Law and Policy, Mediation and Conflict Resolution.

# LLM/MSc

Dissertation

# 

LLM/MSc: 12 months full-time; 24 months part-time PgDip: 9 months full-time; 21 months part-time PgCert: 8 months part-time

# 

First- or upper second-class Honours degree, or overseas equivalent, in law, one of the social sciences, business or humanities. Entry may be possible with other qualifications and/or experience.

Penal Change helped me explore my interests further. I was pleasantly surprised that the course covered such a range of topics, including Criminal Justice & Penal Decision-making, Childhood & Crime, Surveillance, Technology & Control, and Restorative Justice.

# **Tania Nascimento**

Criminal Justice & Penal Change (LLM), Student

# GLOBAL ENVIRONMENTAL /// LAW AND GOVERNANCE /////

LLM

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Learn to critically appraise and creatively contribute to environmental regulation and governance

Develop the skills and expertise to pursue a career in areas of transnational environmental law

Specialise in thematic areas in environmental law

Opportunity to graduate with an LLM in Global Environmental Law & Governance with a specialisation in Ocean Law

Undertake an internship with the International Institute of Environment and Development (IIED) and collaborate with the Strathclyde Centre for Environmental Law and Governance (SCELG)

## 

# **Compulsory Classes**

- International Environmental Law
- International Environmental Law 2
- Global Environmental Law: Issues of Sustainability and Equity
- · Legal Research (LLM only)

# Students also choose classes from other Law Masters programmes from a list which may include (subject to change):

- EU Environmental Law
- International Investment Law and Sustainable Development
- International Climate Change Law
- Ocean Governance and the Law of the Sea
- Fisheries Law and Sustainability

# **LLM Students Only**

Dissertation

### **Specialisation in Ocean Law**

A unique aspect of this course in the ability for students to specialise in Ocean Law. Depending upon which electives you select, you can choose to graduate with an LLM in Global Environmental Law & Governance with a specialisation in Ocean Law. Electives are chosen when you arrive on campus.

# 

12 months full-time; 24 months part-time

# 

First- or second-class Honours degree, or overseas equivalent, in law or an environmental-related discipline (some law content recommended). Entry may be possible with other qualifications and substantial professional experience in the area of environmental law, policy and/or management.

# HUMAN /////// RIGHTS LAW

LLM/PgDip/PgCert

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Focus on how human rights law shapes, and is shaped by, real-life contexts

Learn from a team of approachable academic experts

Engage with policy and legal practitioners at the forefront of human rights leadership in Scotland and abroad

Study with students from a range of professional backgrounds and academic disciplines

Opportunity to be awarded credits for a field dissertation based on research within a non-governmental organisation, in the UK or overseas

# 

# **Compulsory Classes**

- European Human Rights Law
- International Human Rights Law
- Human Rights Protection in the UK
- International Migration Law
- Legal Research (LLM/PgDip)

# Students also choose classes from other Law Masters programmes from a list which may include (subject to change):

- Business and Human Rights
- Children's Human Rights
- Human Rights in Practice
- International Climate Change Law
- International Environmental Law 2
- International Criminal Justice
- Theory and Principles of Conflict Resolution
- Childhood and Crime

# **LLM Students Only**

Dissertation or field dissertation

# 

LLM: 12 months full-time; 24 months part-time LLM with field dissertation: 15 months full-time; 30 months part-time

PgDip: 9 months full-time; 18 months part time PgCert: 8 months part-time

# 

First- or upper second-class Honours degree, or overseas equivalent, in any discipline (some law content is recommended). Entry may be possible with other qualifications, especially where the applicant has relevant work experience.

**EE**The University of Strathclyde offer a wide range of LLM courses in specific areas of law, however, to dedicate an entire year of study on one area of law, for me it was important to choose something I was genuinely interested in and passionate about. As a result, the Human Rights Law LLM was an obvious choice. After reading the course content, it confirmed my selection as it contained a variety of the most topical areas of human rights law, reflecting current issues. •

**Robyn Conlan** 

Human Rights Law (LLM), Student

January 2024 start date available. Visit www.strath.ac.uk for full details.

# INTERNATIONAL ///// COMMERCIAL LAW

LLM/PgDip/PgCert

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Explore how international commercial law deals with real-world challenges

Opportunity to undertake a research placement with an international focus. Available on a competitive basis

Opportunity to specialise in Financial Regulation and gain insights into this rapidly changing area of regulation

# 

# **Compulsory Classes**

- The Law of the World Trade Organisation
- Law of International Business
- Legal Research (LLM/PgDip)

# Students also choose classes from other Law Masters programmes from a list which may include:

- Arbitration Law
- Business and Human Rights
- Financial Crime and Sanctions
- Intellectual Property Law
- E-Commerce
- International Investment Law
- International Migration Law
- Financial Regulation and Compliance
- Cybercrime
- · Competition Law of the UK and EU

### **LLM Students Only**

Dissertation or field dissertation

# **Specialisation in Financial Regulation**

A unique aspect of this course is the ability for students to specialise in Financial Regulation. Depending upon which electives you select, you can choose to graduate with an LLM in International Commercial Law with a specialisation in Financial Regulation. Electives are chosen when you arrive on campus.

# 

LLM: 12 months full-time; 24 months part-time LLM with Field Dissertation: 15 months full-time; 30 months part-time

PgDip: 9 months full-time; 21 months part-time

PgCert: 8 months part-time

# 

First - or second-class Honours degree, or overseas equivalent, in a related discipline. Other qualifications may be accepted where the applicant has relevant work experience. Please note a law degree is not required for entry to this programme.

# 

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Benefit from flexibility and choice to construct your own programme of law studies

Opportunity to participate in masterclasses and teaching by guest speakers

Develop your interest in a particular specialist area

# 

# **Compulsory Classes**

- Legal Research (LLM/PgDip)
- Dissertation (LLM Students Only)

# Students also choose classes from other Law Masters programmes from a list which may include:

- International Environmental Law 1 and 2
- E-Commerce
- Cybercrime and Society (online class)
- Employment Mediation
- Competition Law and Policy in the EU
- Intellectual Property Law
- · Financial Crime and Sanctions
- Telecommunications Law (online class)
- · World Trading System: Law and Policy
- European Human Rights Law
- · International Human Rights Law
- International Migration Law
- · Human Rights Protection in the UK
- Privacy, Crime and Security

### 

LLM: 12 months full-time; 24 months part-time PgDip: 9 months full-time; 21 months part-time

# 

First- or upper second-class Honours degree, or overseas equivalent. Entry may be possible with other qualifications, especially where the applicant has relevant work experience.

# MEDIATION AND CONFLICT RESOLUTION

LLM/MSc/PgDip/PgCert

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Practical skills and a thorough academic foundation – the only course of its kind in the UK

Accreditation by Scottish Mediation

Real-world experience through our innovative Mediation Clinic

A rich blend of students from a range of professional backgrounds including law, psychology, social work, education and management

Full-time and part-time study options

# 

Students may graduate with LLM or MSc depending on the topic of their final dissertation.

# **Compulsory Classes**

- · Theory and Principles of Conflict Resolution
- Mediation in Practice
- Legal Research (LLM/MSc/PgDip)

# **Optional Classes (three to be chosen)**

- Negotiation
- Employment Mediation
- Conflict Resolution and the State
- Legal Process and the Law of Contract and Other Obligations

Students may also choose a class from other Strathclyde Law School Masters programmes.

# **LLM/MSc Students Only**

Dissertation

## 

LLM/MSc: 12 months full-time; 24 months part-time PgDip: 9 months full-time; 21 months part-time PgCert: 8 months part-time

# 

A degree, or overseas equivalent, and/or relevant practical experience.

January 2024 start date available. Visit www.strath.ac.uk for full details.

# PROFESSIONAL //// LEGAL PRACTICE //

# **Diploma**

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Required for entry to the legal profession in Scotland

Experience a unique method of learning the practical application of legal principles

Work collaboratively in firms and apply professional skills to legal simulations - January and September start dates available

# 

The course starts with an intensive week-long Foundation Course for full-time and part-time students which serves as an introduction to practical legal skills and collaborative learning.

The first semester involves the core subjects required by the Law Society, as follows:

- Business and Financial Awareness
- Civil Litigation
- Conveyancing
- Criminal Litigation
- Personal Injury Claims Handling
- Private Client
- Professional Practice and Ethics

In the second semester, students choose five from the following **optional classes**:

- Advanced Civil Advocacy
- Advanced Criminal Advocacy
- Advanced Private Client
- Commercial Contracts and IP
- Commercial Conveyancing
- Company Law
- · Employment Law in Practice
- Family Business
- Family Law
- General Practice Problem Based Learning
- Mediation and Mediation Advocacy
- Practical Public Administration
- Project Management for Lawyers
- Work-based Learning Module in Legal Practice

### 

9 months full-time; 24 months part-time

# 

LLB degree (or equivalent) which meets the requirements and outcomes of the Law Society of Scotland's foundation programme.

# **COMPETITION LAW**

**LLM** (distance learning online)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain skills in understanding and interpreting legislation, jurisprudence, and soft law, regulating competition

Explore ongoing discussions in academic, enforcement and policy-making cycles, which shape the future reforms of competition law

Develop interdisciplinary skills in competition law, economics and policy

Engage and get involved with the Strathclyde Centre for Antitrust Law & Empirical Study competition law academic community

### 

The LLM Competition Law is delivered primarily by face-to-face seminars by experts in their fields.

The LLM Competition Law has three specialist pathways:

- · Competition Law & Private Enforcement
- Competition Law & Digital Economy
- · Competition Law & the State

Satisfactory completion of three modules qualifies you for the PgCert. If you complete six modules you will gain the award of PgDip. To qualify for the LLM you must additionally submit a dissertation of 15,000 words on an approved topic.

# **Compulsory classes**

- Legal Research
- · Competition Law of the UK & EU
- Dissertation

# Students also choose classes from other Law Masters programmes from a list which may include (subject to change):

- Financial Regulation and Compliance
- The World Trading System: Law and Policy
- Intellectual Property (online)
- · The Law of International Business
- Financial Crime and Sanctions
- Business and Human Rights
- E-commerce
- Cybercrime and Society (online)
- Privacy, Crime and Security (online)
- Telecommunications Law (online)
- Human Rights & Digital Technologies

# 

LLM: 12 months full-time, 24 months part-time

# 

First or second-class Honours degree, or overseas equivalent, in a related discipline. Other qualifications may be accepted where the applicant has relevant work experience.

January 2024 start date available. Visit www.strath.ac.uk for full details.

# PROFESSIONAL LEGAL PRACTICE

LLM (online)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Build on previous study and focus on a particular area of professional legal practice

Gain a deeper knowledge and understanding of a particular area of professional legal practice

Flexible study through online learning - January and September start dates available

# 

This course is available on a distance learning basis. Students will normally receive credit for approved prior learning (from their Diploma in Legal Practice or equivalent) which will count towards the LLM award. Students therefore typically complete a compulsory Research Methods class (fully online) and a 15,000-word dissertation on their chosen area of interest.

### **Compulsory classes**

Legal Research Skills and Methods

### 

Generally 12 months by online learning

# 

First- or upper second-class LLB Honours degree and a qualifying Postgraduate Diploma in Legal Practice/Professional Legal Practice from a Scottish university.

Where demand for places exceeds availability, performance of applicants during their studies (i.e. generally the relative performance of applicants in specified LLB classes and over the duration of their Diploma studies) will be taken into consideration.

# LAW (GRADUATE ENTRY) ////

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

The LLB is accredited by the Law Society of Scotland, making it the first step to entering the legal profession

Accelerated two-year programme for graduates from other disciplines with option to add an additional year to gain an Honours degree

Develop your legal skills as a member of Scotland's largest student-run Law Clinic

Working graduates may take the four-year part-time pathway of the programme

### 

The following is a typical course of study incorporating compulsory classes which meet the requirements of the Law Society of Scotland's foundation programme for progression to the Diploma in Professional Legal Practice. For more information on the structure of the part-time course, please contact the Strathclyde Law School.

# **Compulsory Classes**

- Legal Processes and Systems
- Criminal Law and Evidence
- Law of Persons
- · Law of Property
- Constitutional Law
- Law and Society
- Law of Obligations 1
- Law of Obligations 2
- · Administrative Law and Fundamental Rights
- Commercial Law
- EU Law
- Third Year Reflective Project
- 2 Flective Modules

# 

Law students who apply and gain entry to the Law Clinic are eligible to transfer to the Clinical LLB in which they use their clinical training and cases to develop the skills and ethical values required for legal practice. The Clinical LLB includes all of the core LLB classes (some of which will be undertaken clinically) as well as a compulsory module in Clinical Legal Practice and one Elective Module. In addition, students gain credit for the work they undertake in the Clinic, assisting clients who do not qualify for Legal Aid and would otherwise not be able to access legal advice.

# 

Full time: two years

Part-time: four years (option to accelerate to three years) In both cases, students have the option of adding on an additional full time Honours year.

# 

Second-class Honours or Pass/Ordinary degree.

Applicants who do not meet these requirements may also be considered.

# THE DEPARTMENT OF PSYCHOLOGICAL SCIENCES AND HEALTH

### **RESEARCH DEGREES**

MRes/PhD in Speech and Language Therapy/Applied Linguistics

MRes/MPhil/PhD in Physical Activity for Health MPhil/PhD in Psychology

# **Contact for Research Degrees**

e: hass-psh-pgr@strath.ac.uk

# **About The Department**

We are an interdisciplinary Department consisting of four interlinked core subject areas (Psychology, Speech and Language Therapy, Physical Activity for Health, and Counselling). Most research in the Department is focused on improving health. Our research addresses many current societal challenges by translating theory and using technology to help create innovative, positive health impacts in the real world. The Department provides a vibrant, friendly environment for outstanding research and teaching that brings together internationally-recognised academic staff from varied disciplinary backgrounds. We use a diverse range of methods across a variety of interests, from ageing and mental health, communication and speech disorders, to health behaviour change, intervention development and evaluation.

The Department was part of the University's Allied Health submission in the 2021 Research Excellence Framework (the UK's system for assessing the quality of research in UK higher education institutions). This submission was ranked joint first in the UK for both research impact and research environment.

Our staff engage in research and undertake postgraduate teaching and research supervision across four subject disciplines:

- Counselling
- Physical Activity for Health
- Psychology
- Speech and Language Therapy

These topics generate complex, multidisciplinary research. Staff collaborate with international colleagues across these subjects and with other disciplines in social science, humanities, science, and engineering. To see the full breadth of research activity within the Department, prospective students are recommended to consult our staff research profiles on our website. We suggest you contact potential supervisors in advance of your application for MRes, MPhil, or PhD study to discuss the possibilities and develop a research proposal.

# Research Areas MRes/MPhil/PhD in Physical Activity for Health

Study with the Strathclyde Physical Activity for Health research group, an internationally excellent centre for research, teaching and knowledge exchange. Our research is focused on the development and testing of interventions that encourage people to participate in more physical activity and less sedentary behaviour throughout life. Our programmes are flexible with part- or full-time options and you'll be guided by leading academics throughout. Part time options offer the opportunity to do a research degree alongside and aligned to your current practice.

- · Global health
- Childhood obesity
- Diabetes
- · Bone health in older adults
- · Learning disability and mental health
- Department based interventions
- 24 hour movement behaviour in young people
- Health behaviour change intervention in children
- · Physical activity in adolescents
- Data analytics and technology-based methodology and interventions

We also have excellent facilities to keep yourself active through StrathclydeSport, our £31m state-of-the-art sports centre.

# MPhil/PhD in Psychology

Strathclyde Psychology provides a vibrant, friendly and inclusive environment for outstanding research and teaching with internationally-recognised researchers. We are well connected to government, health services, and the charity sector, and have an outstanding record of research impact.

Our team of health, clinical, social, and cognitive psychologists work together to develop, test, and apply psychological theory to help improve health and wellbeing throughout people's lives. For example, we research areas such as mental health, cognitive ageing and dementia, vaccination behaviour, and sleep across a range of populations.

We have particular strengths in relation to cognition and brain health, investigating abilities such as learning, memory, and perception, as well as in the study of health and health behaviour change. We incorporate a wide range of techniques, from standardised, paper-and-pencil and computer-based tests, to eye-tracking and neuroimaging technologies such as EEG and Virtual Reality. We are also experts in qualitative approaches such as interpretative phenomenological analysis. Our research projects often include healthy young and older people, or people with neurological conditions or mental health problems (e.g., stroke, Alzheimer's disease, suicidal ideation).

A range of innovative University-wide, multi-disciplinary research networks are also led by researchers within the Psychology group, including the Strathclyde Ageing Network, Health and Care Futures, and the Strathclyde Doctoral Training Centre in the Social Dimensions of Plastics: Communications, Behaviours and Social Change. We also have a variety of industry and international partnerships who support our research.

# MRes/PhD in Speech and Language Therapy/Applied Linguistics

The one year MRes in Speech and Language Sciences involves 20 credits of a taught element on research skills alongside completion of a piece of extended, independent research dissertation in a topic related to speech and language sciences.

The Department of Psychological Sciences and Health hosts a well-established Doctoral Training Centre (DTC) in Communication Disorders.

We offer supervision in a wide range of communicationrelated areas, including issues such as speech sound disorders, voice, dementia, autism, stroke, dysphagia, dysarthria, telehealth and other uses of technology in client treatment. In addition, we have expertise in investigating speech patterns in healthy populations, including first and second language learners. Depending on prior qualifications and research interests, students can register for the speech and language therapy or applied linguistics pathway.

The DTC comprises supervisors from all four faculties of the university, providing a platform for highly interdisciplinary research related to studying communication disorders and how to treat them. We have strong relationships to medical and allied health professionals in health boards across Scotland and the rest of the UK to support clinical research, as well as with industry partners through the Digital Health and Care Institute.

# MPhil/PhD in Counselling

Our MPhil/PhD in Counselling is an opportunity for practising counsellors/psychotherapists to develop their research knowledge and skills by conducting a substantial practice-based research study related to the process or outcome of counselling. We specialise in person-centred-experiential therapy and have our own research clinic that offers the opportunity to access our substantial data archive or to conduct new data collection.

# POSTGRADUATE TAUGHT COURSES

- Clinical Health Psychology
- Counselling and Psychotherapy
- Research Methods in Psychology
- Psychology with a Specialisation in Business or Health
- Physical Activity for Health
- Sport Data Analytics

# **Contact for Postgraduate Taught Courses**

e: studywithus-hass@strath.ac.uk

# EDUCATIONAL PSYCHOLOGY

**DEdPsy** 

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

The DEdPsy is a flexible research degree designed to meet the needs of practising Educational Psychologists (EPs) with at least one year's experience in the field

The course combines applied psychology with high quality real world research in a variety of vital and complex educational issues

It provides a framework in developing rich evidence-based practice and self-reflection

- Develop research skills in design, data collection and analysis leading to the submission of an original thesis that makes an identifiable contribution to knowledge in an area of developmental/educational psychology
- Cultivate a critical academic understanding of current advances in theory and research within a specialist area of professional expertise
- Develop effective, critical and reflective independent professional practice using a range of assessment and intervention approaches that are underpinned by psychological paradigms and are evidence-based
- A wide range of career-long professional development opportunities (CLPL) are available to enrich and expand students' psychological toolkit
- All supervisors are Health and Care Professions Council (HCPC) registered Educational Psychologists

We have expertise in all aspects of educational and developmental psychology.

# 

The minimum period of study for Scottish Educational Psychologists with an MSc in Educational Psychology is 24 months.

# 

Normally, a Masters degree in Educational Psychology. Candidates without an MSc may have to complete an additional 9 month portfolio of 3 small-scale pieces of project work carried out in practice.

# CLINICAL HEALTH PSYCHOLOGY

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Prepare yourself for an application to an applied psychology training programme (for example: Doctorate in Clinical or Counselling Psychology, PhD in an applied area, Clinical Associate in Applied Psychology training, Cognitive Behavioural Therapist training)

Unique combination of clinical, health and neuropsychology modules

Dedicated training to support professional and ethical practice

Practitioner-led workshops covering key psychological therapies

Advanced research methods training

Links with external partners who provide voluntary placement opportunities

Dissertation project on an applied topic relevant to Clinical Health Psychology

Support to identify external partners who may provide voluntary placement opportunities

# 

# **Compulsory Modules**

- Clinical Psychology
- Health Psychology
- Neuropsychology
- Professional Practice
- Introduction to Psychological Therapies
- Research Methods in Clinical Health Psychology
- Research Dissertation

# 

12 months full-time; 24 months part-time

### 

First - or Upper Second class Honours degree in Psychology, or overseas equivalent

Applicants whose first language is not English require IELTS 7.0

Applicants with a non UK degree must be able to evidence that they've undertaken a statistics class/module and also a research methods class/module and completed a research project/dissertation in their undergraduate degree.

# COUNSELLING AND PSYCHOTHERAPY

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Professional qualification in Counselling and Psychotherapy, accredited by the British Association of Counselling and Psychotherapy (BACP)

The opportunity to train in the person-centred/ experiential therapeutic modality covering the work of Carl Rogers and including a wide range of recent developments in the field

Learn through delivery of experiential and interactive workshops delivered by experienced practitioners in the field

The opportunity to undertake significant personal development to enhance your professional practice

The opportunity to undertake work placements with clients in a range of health and wellbeing settings

Learn about current research to inform your professional practice and undertake a research project relevant to this modality

# 

# **Compulsory Modules**

- The Therapeutic Relationship
- Personality Theory
- The Therapeutic Process
- Counselling Case Formulation
- Personal and Professional Development
- Counselling Practicum
- Counselling Research Dissertation

# 

The full-time and part-time courses are being reviewed and the duration is to be confirmed. Check our website for details.

# 

First- or upper second-class Honours degree, or an equivalent qualification; COSCA Certificate in Counselling Skills or an equivalent qualification.

# PSYCHOLOGY WITH A SPECIALISATION IN BUSINESS OR HEALTH

MSc (online distance learning)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Route to Graduate Basis for Chartered Membership with the British Psychological Society

Gain knowledge of the core domains of psychology

Develop an understanding of the applications of psychology to real life, particularly business or health contexts

## 

The programme is delivered entirely online.

### **Psychology Classes**

- Social and Developmental Psychology
- Conceptual and Historical Issues in Psychology and Individual Differences
- Psychobiology and Cognitive Psychology
- Research Design and Analyses in Psychology

# **Business Classes**

- Organisational Psychology
- Leadership in Organisations
- Foundations of Risk
- Psychometrics in Organisations

# **Health Classes**

- Understanding Health
- Promoting Health

Students will also conduct an empirical project (dissertation) under the supervision of a member of staff.

### 

- Delivered full-time over 12 months
- Delivered part-time over 24 months
- Option available to study flexibly part-time for up to 60 months
- Both full-time and part-time study takes place via online learning

# 

First- or upper second-class Honours degree, or overseas equivalent, in law, social sciences or related disciplines, or a Masters degree; in some cases a qualification deemed to be equivalent may be considered.

Psychology Honours graduate (without Graduate Basis for Chartered Membership of the BPS) with lower second-class degree (or international equivalent).

# 

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Learn the skills and theory for conducting research

Undertake a substantial research project, with one-to-one supervision

Enhance your academic profile for doctoral funding applications or for research assistant posts

## 

# **Compulsory Modules**

- Ouantitative Research Methods
- · Qualitative Research Methods
- Perspectives on Social Research
- Research Design

Students also undertake an individual research project under the supervision of a member of staff. Supervision by active researchers with international track records is available across a wide range of topics.

# 

12 months full-time

# 

First or upper second-class degree in Psychology, or overseas equivalent.

# SPORT DATA /// ANALYTICS ////

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop skills in sport data analysis, interpretation, and presentation

Gain hands-on experience in a professional sporting environment through engagement with our external partners

Gain a comprehensive overview of sport data analysis, covering key areas such as talent identification, recruitment analytics, video analysis, and performance evaluation for individuals and teams

Offering opportunities to interact with professionals such as sport scientists, performance, data, recruitment, talent or notational analysts through guest lectures and networking opportunities

A high emphasis on analytics, providing you with the technical skills to analyse complex data sets using cutting-edge techniques and software

Build a portfolio through high-quality placement opportunities with external partners

# 

### **Compulsory Modules**

- Introduction to Sport Data Analytics
- Recruitment Analytics in Sport
- Video Analysis in Sport
- Professional Placement
- Data Visualisation in Sport
- Research Methods in Sport Data Analytics
- Dissertation

# 

12 months full-time; 24 months part-time

# 

First or upper second-class Honours degree in Sport or Computer Science.

Possess other qualifications deemed, by the Programme Leader, to be equivalent to the above, or be deemed, by the Programme Leader, to have achieved an academic standard equivalent to the above.

Applicants whose first language is not English shall be required to demonstrate an appropriate level of competence in the English language with IELTS not less than 6.5.

# THE DEPARTMENT OF SOCIAL WORK AND SOCIAL POLICY

# **RESEARCH DEGREES**

MPhil/PhD in Criminology, Public Health and Health Policy, Social Policy, Social Work

## **Contact for Research Degrees**

e: hass-postgrad@strath.ac.uk

We encourage prospective research students to consult the individual staff research profiles on our website and to contact potential supervisors before applying.

## **RESEARCH**

The Department of Social Work and Social Policy offers postgraduate research degrees in Social Work and Social Policy, Criminology and Public Health and Health Policy.

In Social Policy, we offer supervision across each of the Department's main research areas (see below). We cover both historical and contemporary issues, and welcome enquiries from students with interests in Scotland, the UK and globally. We are currently supervising students on a wide range of topics from volunteering in contemporary Scotland, the role of evidence in policy commitments to preventing youth violence, and public attitudes to the welfare state.

Our Social Work staff also offer supervision across all of our research areas. Current work includes studies of the provision of support for disabled children and their families, various aspects of criminal justice social work, and the experiences of looked-after children and care-leavers. Many of our current students benefit from the opportunity to work with colleagues in the Centre for Excellence for Children's Care and Protection (CELCIS) and the Children and Young People's Centre for Justice (CYCJ).

Our PhD programme in Criminology draws on the expertise of colleagues in both Social Work and Social Policy and the Strathclyde Law School. We offer supervision across a range of topics, including youth and criminal justice, criminalisation, punishment and sentencing, the promotion of desistance, prison health services, and prisoners' relationships with their families and the wider community. We also have close links with the Children and Young People's Centre for Justice and the Scottish Centre for Crime and Justice Research.

The Department also manages a dedicated PhD programme in Public Health and Health Policy. This programme also draws on the expertise of colleagues in the Centre for Health Policy which provides a platform for linking to health expertise across the University. The Centre for Health Policy runs an annual international Summer School with New York University for postgraduate students with an interest in mental health. We are currently supervising students who are working on a variety of different topics, ranging from the impact of mental health problems on women experiencing poverty to analyses of the impact of wide-ranging policies on the UK's widening health inequalities.

# **Research Areas**

We encourage colleagues to work across disciplinary boundaries and this is reflected in the construction of our four Research Clusters:

# **Children, Young People and Families**

Research topics include improvement in services for children and young people; marginalised youth and social inequalities; children and young people's rights; migrant children; evidence-based practice and sustainable change in policy and practice. We work with a range of funders and partners, including the Scottish Government, local authorities and related voluntary sector organisations and international partners. Many of our team are based within the Children and Young People's Centre for Justice (CYCJ) and the Centre for Excellence for Children's Care and Protection (CELCIS).

# **Health and Wellbeing**

Research ranges from historical studies of health and morbidity and the conceptualisation of health and wellbeing to the role played by information technology in the provision of health services and the interface between health and social care. Our work also encompasses research in the fields of older age, the medicalisation of everyday life, and mental health and disability. We have close links with CELCIS, CYCI and the Centre for the Social History of Health and Healthcare. Understanding and tackling health inequalities is a theme that cuts across the interests of this research cluster. We also play a key role in the University-wide Centre for Health Policy and collaborate with a number of external partners, including Scotland's Commissioner for Children and Young People, the World Health Organisation and New York and Yale Universities.

# **Criminal and Social Justice**

Our researchers undertake applied research on issues of criminal and social justice, penal and social policy and practice. We have strong links with the Scottish Government, Scottish Prison Service, Criminal and Youth Justice Social Work Services, and related voluntary sector and penal reform organisations. We are partnered with the Scottish Centre for Crime and Justice Research (SCCJR), which is a consortium of the Universities of Edinburgh, Glasgow, Stirling and Strathclyde. Research topics include crime and desistance; risk, regulation and reintegration; prisons, imprisonment and re-entry; punishment and penal practices; co-production in community justice; and children, young people and crime and justice.

# **Citizenship and Communities**

Research in this area covers a range of historical and contemporary topics associated with the study of citizenship and communities in Scotland and the UK, and across the world. Our interests include the history of mutual aid and philanthropy, social investment and inclusive growth, the enhancement of citizenship rights and social cohesion, the development of welfare-to-work programmes, the impact of devolution on UK social policy, the relationship between migration, resettlement, culture and identity, and community involvement in the provision of healthcare.

# POSTGRADUATE TAUGHT COURSES

**Contact for Postgraduate Taught Courses** 

e: studywithus-hass@strath.ac.uk

We offer a range of both academic and professional courses for postgraduate students. Our academic courses include MSc programmes in International Social Welfare, Social Policy, Social Policy (Research Methods), Criminology and Social Policy and Health & Social Policy. All of these courses can be taken on a full-time or part-time basis.

We also offer a range of vocational or professional courses, including the Postgraduate Certificate in Mental Health Social Work, Postgraduate Certificate in Children and Young People in Conflict with the Law, the MSc in Advanced Residential Child Care, the MSc in Child and Youth Care Studies, and the Master in Social Work (MSW). The Postgraduate Certificate in Mental Health Social Work and the MSc in Advanced Residential Child Care are both part-time programmes. The MSc in Child and Youth Care Studies and PgCert in Children and Young People in Conflict with the Law are part-time programmes delivered through distance learning. The Master in Social Work (MSW) is a full-time course spread over 2 years.

### **Social Work**

- MSW Social Work
- Advanced Residential Childcare
- Child and Youth Care Studies
- Mental Health Social Work
- Children and Young People in Conflict with the Law

# **Social Policy**

- Social Policy
- Social Policy (Research Methods)
- International Social Welfare
- Criminology and Social Policy
- Health and Social Policy

# 

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

An initial qualifying programme in social work validated by the Scottish Social Services Council

Placements of 90 days in each year of the course in a range of social work service settings

Gain a qualification recognised outside the UK

Provides a stimulating blend of university-based
teaching and agency-based learning opportunities

teaching and agency-based learning opportunities across both years

The opportunity to develop the knowledge and skills

# Year 1 Classes

- Social Policy, Law and Social Work Organisations
- Theory, Practice and Professional Development
- Research Methods 1
- Professional Practice 1

## **Year 2 Classes**

- · Risk and Protection in Organisational Contexts
- Theory and Practice 2
- Research Methods 2
- Professional Practice 2
- Masters Dissertation

# 

Placements of 90 days from January to May are provided across the statutory and voluntary sectors, in a range of Social Work service settings, which may include (but not exclusive to) childcare, community care, criminal justice service, mental health services, residential care, homelessness services, addiction services, etc.

# 

Two years (full-time)

# 

Upper second-class Honours degree, preferably in a social science discipline but graduates in other disciplines with an understanding of social sciences are welcome. Maths National 5 (or equivalent) or above. Applicants must be able to demonstrate sufficient numerical, statistical and budgetary competence. An English qualification at the minimum of SCQF level 5 or equivalent is also required (or evidence of an Honours Degree). In exceptional cases where an applicant does not have a degree, the applicant may be considered if they have extensive professional experience showing career development and can demonstrate academic ability at postgraduate level, equivalent to SCQF Level 10 or above. Six months directly relevant experience in social work, social care, community work or a closelyrelated activity at the point of application or twelve months equivalent part-time experience. This is compulsory.

### 

Apply via UCAS 'Social Work (Graduate Entry)' course code L508 for Masters-level entry.

# ADVANCED RESIDENTIAL CHILD CARE

# MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Only course in the UK devoted entirely to residential child care

Develop knowledge and abilities for optimal practice

The MSc/PgDip meet the management requirement for registration with the Scottish Social Services Council

# 

The course is modular and requires class attendance for six days per module; there are four modules in Year 1 and two modules in Year 2. A further six months is allocated for completion of a practice-based dissertation.

# **Compulsory Classes**

- Critical Perspectives on Residential Child Care
- Understanding and Assessing in Children's Life-spaces
- Ethical Leadership and Management in Residential Child Care
- Skilled and Reflective Use of Self in Residential Child Care
- Intervening Effectively in Residential Child Care
- Methods: Effective and Ethical Research in Residential Child Care
- Professional Enquiry in Residential
   Child Care: Dissertation

# 

24 months part-time

# 

Degree (minimum 360 SCQF credit points) or equivalent qualifications and experience.

Students with professional or academic qualifications other than social work will be considered.

No charges apply to students employed in residential child care settings in Scotland. Fees for this programme are paid through a Scottish Government grant (subject to continued funding) to CELCIS.

Current employment in residential child care or closely cognate setting (e.g. Care Inspectorate, training or education of residential child care practitioners), along with at least a year of experience working in residential child care.

January 2024 start date available. Visit www.strath.ac.uk for full details.

# CRIMINOLOGY AND // SOCIAL POLICY ////////

MSd

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

This course will provide you with a critical and nuanced understanding of criminology, criminal justice and social policy, and of the wider political, economic and social context within which criminological research takes place

You will be taught social science research methods, alongside key issues, theories and debates in criminology, social and penal policy and practice, schooling you in cutting-edge knowledge across these arenas

You will become equipped to evaluate, design, and deliver research projects across justice-related and social science disciplines and develop an understanding of the impact that such research has on policy and practice, and vice versa

# 

# **Compulsory Classes**

- The Contexts of Criminal Justice Research
- Contemporary Issues in Criminology
- · Prisons, Power and Punishment
- At least one Research Methods module is required, with Optional Classes included to make up 3 modules of 60 credits
- Students undertaking the MSc must take the Dissertation in Criminology module

### **Optional Classes**

- · Perspectives on Social Research
- Welfare Concepts and Ideas
- App. to Welfare: Past, Present and Future
- International Social Work: Themes and Perspectives
- Inequalities and Social Policy
- Advanced Project in Social Policy
- International Social Welfare Project
- International & Comparative Welfare

### **Dissertation**

· A Dissertation in Criminology.

# 

12 months full-time, 24 months part-time

### 

A first or upper second class Honours degree, or overseas equivalent, in social sciences or related discipline. Applicants with other qualifications together with relevant professional experience may be considered.

# CHILD AND YOUTH /////CARE STUDIES

MSc (online distance learning)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

A Child and Youth Care Masters-level programme delivered entirely remotely with all classes delivered online

The programme is accredited by the Child and Youth Care Educational Accreditation Board of Canada as a provider of quality post-secondary education in the field of Child and Youth

Develop theoretically-informed, practice-based understanding of issues related to the social, political and cultural contexts of children and youth

### 

Classes involve a range of individual and group tasks in addition to live online sessions where students participate in online seminars.

### **Compulsory Classes**

- Globalised Childhood: Theoretical and Policy Contexts
- Child Development in the Lifespace
- Critical Reflection and Relational Practice
- · Management and Leadership
- Interventions
- Research Methods
- Masters Research Project (incorporating dissertation)

# 

24/36 months part-time distance learning

### 

A first degree or relevant professional qualification, or a combination of qualifications and experience demonstrating capacity for postgraduate study.

Participants will also require sufficient access to child care settings through which they can evidence practice requirements. However, these requirements are broad enough to allow those in external management, supervisory and education/training positions to do so.

You will need to have access to a device/computer with sufficient processing capability and an excellent broadband connection.

January 2024 start date available.
Visit www.strath.ac.uk for full details.

# CHILDREN AND YOUNG PEOPLE IN CONFLICT WITH THE LAW

PgCert (online)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

This exciting course has been recently developed by the Children and Young People's Centre for Justice (CYCJ) to provide a professional postgraduate qualification for individuals who wish to improve outcomes for children and young people on the edges of, or in conflict with, the law

Expand your knowledge and understanding of the rights of children and young people in conflict with the law and their typical developmental pathways, with a focus on assessment and formulation models and best practice intervention approaches whilst gaining a professional qualification

As a fully online, part-time course, it offers you the flexibility to grow your knowledge, skills and continued professional development whilst maintaining existing professional and personal commitments

### 

The course consists of a range of individual and group activities as well as regular live online seminars.

### **Compulsory Classes**

- · Policy and legislative context
- Developmental pathways, assessment, and formulation
- · Intervention approaches

# 

12 months part-time

# 

Individuals will be required to have a relevant undergraduate degree or professional qualification and demonstrate capacity for postgraduate study.

You will also require access to a device/computer with sufficient processing capability and an excellent broadband connection.

# MENTAL HEALTH // SOCIAL WORK /////

**PgCert** 

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain a qualification to contribute positively to the care and treatment of those experiencing mental disorder

Undertake practice experience with your employing local authority

Benefit from the specialist input from guest lecturers

# 

The course is offered in partnership with 12 local authorities in the west of Scotland, represented by the Scotlish Social Services Council Learning Network West.

# **Compulsory Classes**

- Mental Disorder, Mental Health Legislation and Human Rights
- Capacity, Incapacity, and the Law in Scotland
- Working with Individuals with a Mental Disorder who are subject to Criminal Proceedings

### **Work Placement**

Two blocks of practice experience – September to December and February to May are undertaken in your employing local authority, supervised by a suitably-qualified member of staff, and supported by the course team.

# 

30 days of teaching/contact time during term time. You will need to commit to a minimum of 600 hours of study, practice learning and assessment over the course of the academic year.

# 

Applicants must be nominated and supported by their employing local authority, and be provided with appropriate learning opportunities. A minimum of two years post-qualifying experience is normally expected and you should be able to demonstrate that you have improved and extended your level of competence since qualification.

A professional social work qualification recognised by the Scottish Social Services Council (SSSC) is required. Suitable qualifications include BA (Honours) Social Work, Diploma in Social Work, Certificate of Qualification in Social Work (CQSW) and its predecessor qualifications, Certificate in Social Service. If you trained abroad, a letter of comparability with the CQSW or a letter of verification issued by SSSC (or another registering Council in the UK) will be required.

# SOCIAL POLICY/ SOCIAL POLICY (RESEARCH METHODS)

MS

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Expand your knowledge of contemporary issues facing social welfare and wellbeing and how social policy responds to them

Develop knowledge and research skills highly valued by public, third and private sector employers

Acquire research training vital for further study at PhD level by opting for MSc Social Policy (Research Methods)

This course has two pathways. The Social Policy pathway is for students who wish to update their existing knowledge and skills and improve their understanding of social policy.

The Social Policy (Research Methods) pathway draws on many of the same classes while offering students more opportunities to develop their research skills. Both pathways enable students to undertake an independent research project.

The Research Methods pathway is recognised by the ESRC (Economic and Social Research Council) and is particularly appropriate for those seeking to undertake postgraduate research (e.g. a PhD).

The programmes are suitable for those who have studied social policy at undergraduate level, as well as graduates of other disciplines.

# 

Each pathway includes compulsory and optional classes. In addition, MSc students complete a 15,000-word dissertation.

# **Compulsory Classes**

- · Perspectives on Social Research
- Quantitative Methods\*
- Qualitative Methods\*
- Welfare Concepts and Ideas
- Comparative Social Policy and Welfare Systems
- Dissertation (MSc only)

\*students on the Social Policy pathway must take one of these classes. Students on the Research Methods pathway take both.

# **Optional Classes**

Social Policy is an interdisciplinary field of study which draws inspiration from many areas.

We currently offer the opportunity to choose options from a number of disciplines across the Faculty.

Examples of classes available include:

- Advanced Project Module (students produce an independent project within the research interests of a member of Social Policy teaching staff)
- Inequalities and Social Policy
- Prisons, Power & Punishment
- Policy Analysis
- Health Policy in an International Context
- International Institutions and Regimes
- The Contexts of Criminal Justice Research
- Contemporary Issues in Criminology
- Comparative Public Policy
- Contemporary International Relations

## RESEARCH METHODS PATHWAY '//////

Studying Social Policy at Strathclyde means students will work closely with and learn from the Department's growing number of internationally-recognised researchers and their work. This includes such issues as:

- migration
- history of social policy
- gender-based violence
- · health policy and health inequalities
- social investment and inclusive growth
- criminology and penology
- evidence and policymaking

# 

12 months full-time; 24 months part-time

# 

First or upper second-class Honours degree, or overseas equivalent, in Social Policy or a related discipline.

# INTERNATIONAL SOCIAL WELFARE

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop a critical understanding of global social issues

Prepare students to work in a variety of different social work and social development settings

Explore the complexities, challenges and dilemmas experienced by professionals in the fields of social work and social policy

# 

# **Compulsory Classes**

- · Welfare Concepts and Ideas
- Comparative Social Policy and Welfare Systems
- International Social Work: Themes and Perspectives

Choose one or both of the below. If you choose one Methods class, select two Optional Classes, if you choose two, select one of the Optional Classes.

- Quantitative Methods
- Qualitative Methods

# **Optional Classes**

- Risk and Protection In Organisational Contexts (Social Work)
- Theory and Practice (Social Work)
- · Prisons, Power & Punishment
- Policy Analysis
- Health Policy in an International Context
- International Institutions and Regimes
- The Contexts of Criminal Justice Research
- Contemporary Issues in Criminology
- Comparative Public Policy
- · Contemporary international Relations
- · Economic Appraisal and Modelling
- International Social Welfare Project

### **Masters Students Only**

Research project with 15,000-word dissertation

# 

12 months full-time; 24 months part-time

# 

First-class or upper second-class Honours degree, or overseas equivalent, in any discipline. Entry may be possible with other qualifications, where the applicant has relevant work experience.

# **HEALTH & SOCIAL POLICY**MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Take a whole-systems approach to exploring health and social policies in their societal context

Develop and extend your knowledge of contemporary health policy challenges such as intersectional health inequalities, declining healthy life expectancy, debates around health system financing, and work to prevent future pandemics

Study how these policy areas interact, and how societies influence the development of health and social policies

Develop knowledge, research and critical appraisal skills highly valued by public, third and private sector employers

Undertake a placement with a public sector, third sector organisation or academic research team working on key health and social policy issues

# 

# **Compulsory Classes**

- Co-production and Engagement in Health Policy & Practice
- Inequalities in Social Policy
- Health Policy in an International Context

# **Elective modules**

Choose one or both of the below. If you choose one Methods class, select two Optional Classes, if you choose two, select one of the Optional Classes.

- Ouantitative Methods
- Qualitative Methods
- Welfare Concepts & Ideas
- Perspectives in Social Research
- Food and Health in the West during the 20th Century
- Becoming an Effective Health Analyst
- Concepts and Theories of Sustainability
- Media and Health
- Comparative Social Policy & Welfare Systems
- Health Systems Performance, Financing & Innovation
- Gender, Health & Modern Medicine

# **Dissertation**

Social Policy dissertation OR a placement-based dissertation (e.g. with a public or voluntary sector organisation)

### 

12 months full-time; 24 months part-time

# 

First or upper second-class Honours degree, or overseas equivalent, in health or social policy or a related discipline.

# CENTRE FOR LIFELONG LEARNING

# **POSTGRADUATE TAUGHT COURSES**

- · Genealogical, Palaeographic and Heraldic Studies
- · Safety and Risk Management

**Contact for Postgraduate Taught Courses** 

e: studywithus-hass@strath.ac.uk

For more than 40 years, the Centre for Lifelong Learning has contributed to the University's founding principle to be a 'place of useful learning open to all'. Through providing a range of learning opportunities for adults of all ages, the Centre encourages participation in learning throughout life, whether for personal or professional development.

Its online postgraduate programmes are renowned for being practitioner focused, ensuring students emerge with skills of direct relevance to their lives, work, and career ambitions.

The launch of Strathclyde Institute for Genealogical Studies (SIGS) further supports the Centre's commitment to delivering the very best in genealogical education. Working with colleagues across the University, the Institute benefits from being able to capture the latest knowledge and research findings, ensuring course content is continually refreshed to reflect the latest developments in the academic field of genealogy.

The MSc in Safety & Risk Management, offered by Strathclyde Centre for Occupational Safety and Health (SCOSH), is the largest of its kind in the UK. The SCOSH team of professionals, including consultants, practitioners, and academics bring together extensive experience in successfully delivering the MSc programme as well as providing an expanding range of qualifications and professional development opportunities that can be readily applied within the workplace.

The Centre also delivers a large portfolio of classes – both on-campus and online. Choose from a range of transferable skills for work Upskilling modules, counselling/wellbeing training, professional CPD courses and over 150 classes for adults including languages, art, creative writing and history.

To find out more, please visit our website at www.strath.ac.uk/studywithus/centreforlifelonglearning

January and April 2024 start dates available.
Visit www.strath.ac.uk for full details.

# GENEALOGICAL, PALAEOGRAPHIC AND HERALDIC STUDIES

# MSc/PgDip/PgCert

(distance learning)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain a grounding in the theory and practice of genealogical research, records, archives and heraldry

Focus on the sources available to genealogists and family historians

Study online by distance learning

Opportunity to progress to a PhD programme

# 

# **Compulsory Classes**

- Professional Practice and Methodologies
- Repositories, Geography and Administration
- Civil and Church Records
- Family History Studies and Overseas Records
- · Property, Law and Inheritance
- Heraldry and Latin
- Methods of Professional Enguiry and Research Project
- Genealogy, Heraldry and Social History 2
- Documents, Palaeography and Research Studies

### **Masters Students Only**

Professional Enquiry and Development and dissertation

# 

PgCert: Normally a degree or similar evidence of study skills is required; however non-standard educational or professional qualifications will be considered, particularly the Open Studies Certificate in Genealogical Studies offered by the University. Some experience in genealogical (or other relevant) research is also required.

PgDip: Entry is normally by successful completion of the Postgraduate Certificate.

MSc: Entry to the part-time MSc by dissertation is by successful completion of the Postgraduate Diploma and invitation

Entry to the full-time MSc requires an undergraduate degree and some experience in genealogical (or other relevant) research

The course is delivered online, so you will require computer access at home. You should be familiar with the use of computers in genealogy and the course is standardised on Microsoft Windows. You will also need to subscribe to or pay for certain online databases and services.

March 2024 start date available. Visit www.strath.ac.uk for full details.

# 

# MSc/PgDip/PgCert

(distance learning)

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Study from anywhere by distance learning

Accredited by the Institution of Occupational Safety and Health for Graduate Membership

Open to those without a first degree

Gain practical knowledge of direct use in the workplace via practitioner-led support

CPD courses available including IOSH Managing Safely and Radiation Protection

# 

# **Compulsory Classes**

- Benchmarking Safety and Risk Management
- Assessing Hazards, Risks and Dangers
- Optimising Safety and Risk Management
- Psychology of Workplace Activities
- · Ergonomic Factors in Work Activities
- Corporate Risk Management
- Methods of Professional Enquiry

# **Masters Students Only**

Research project with 12,000-word dissertation

# 

PgCert: Foundation-level certificate in occupational health and safety and a university degree (or equivalent preparation for postgraduate study). Relevant work experience will also be taken into account.

PgDip: Successful completion of the University of Strathclyde Certificate in Safety and Risk Management. Applicants who have gained other qualifications and experience equivalent to GradIOSH and hold a 2:2 honours degree plus significant relevant work experience may be accepted on to the Diploma, subject to certain conditions.

MSc: Direct entry to the MSc is available to students who hold a Postgraduate Diploma in a Safety-related discipline.

# PROFESSIONAL DOCTORATE IN ADVANCED PRACTICE (WITH OPTIONAL SPECIALISATION)

# **DProf**

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

DProf students will focus on solving practical problems in the workplace while drawing on current theoretical research, and will lead to a doctoral level degree. This new programme is offered through flexible, part-time study over 5-7 years, with both taught elements and a doctoral thesis

The DProf is aimed at professionals working across a range of sectors, including the NHS, local authorities, UK and devolved governments, third sector organisations and the private sector. It has been designed to appeal to people with several years' experience in leading, or preparing to lead, practice/professional development and personal growth within their organisations or professional communities

In addition to the generic DProf route, the following specialisms will be offered:

- Health (in collaboration with the University's Health and Care Futures programme)
- Social Work
- Social Policy and Criminal Justice
- Law
- · Law, Crime & Justice
- Environmental Law & Governance
- Competition Law
- Internet Law & Policy Law
- Public Law

# PART-TIME COURSE STRUCTURE !////

# Year 1 (Taught stage)

# Semester 1

Methods of enquiry in contemporary professional issues

# Semester 2

 Choice of optional or subject specialisation pathway class(es)

# Year 2 (Taught stage)

### Semester 1

 Choice of optional or subject specialisation pathway class(es)

### Semester 2

Advanced study design and research proposal professional issues

### Years 3-5 (Research stage)

Thesis supervised by two supervisors, aligned with the University's areas of research expertise

### 

Start date: Autumn 2023.

Candidates who have completed a Masters degree in a relevant field in the last five years may be eligible to apply for the accreditation of prior learning for up to 60 credits.

The minimum course duration is 5 years; the maximum is 7 years.

# 

Applicants will normally have a Masters degree (with Merit or Distinction) in a relevant field from a UK University (or recognised equivalent); or a First Class - or upper Second Class Honours degree in a relevant professional field with a minimum of 5 years' relevant work experience in an applicable field at a senior level. Exceptionally, applicants with only an academic or professional qualification may be considered for admission, provided they can demonstrate a record of relevant research engagement and/or relevant activity within the workplace.

# 

Graduate School, Faculty of Humanities & Social Sciences

**e:** hass-postgrad@strath.ac.uk **t:** 0141-444 8452/8455 from Strathclyde provides immediate respect and lends widely recognized credibility to my resume as a professional genealogist.

# Jennifer Banks

Genealogical, Palaeographic & Heraldic Studies (MSc), Student

# THE WAR THE WA

We offer our students high-quality teaching, informed by innovative research, within one of the UK's leading schools of science.

We provide a dynamic, supportive and friendly place to study. The Faculty offers a wide range of postgraduate taught courses and research opportunities designed to offer you advanced skills relevant in today's global workplace.

With the largest number of research students in the University, we investigate the challenges and possibilities of the natural and technological world – from drug discovery and public health to environmental concerns, tackling cybercrime and understanding space.

Multimillion-pound funding from research councils, the National Health Services (NHS), charities and industry ensures our research is relevant and of national and international importance.

Delivered by world-class researchers, our Masters programmes provide the opportunity to gain an invaluable postgraduate qualification which will enhance your career prospects.

There are opportunities for cross-disciplinary research and study, both within the Faculty, or across other University faculties and centres.

In choosing to study science at Strathclyde you will become part of an international community of staff and students from more than 40 countries.

Our facilities are excellent, with well-equipped, modern laboratories and teaching rooms, plus 24-hour access to an advanced computer information network and a sophisticated virtual e-learning environment.

# Contact

Faculty of Science e: science-masters@strath.ac.uk





# DEPARTMENT OF COMPUTER & INFORMATION SCIENCES

### **RESEARCH DEGREES**

MPhil, PhD, DInfSci

Contact for Research Degrees

t: +44 (0)141 548 3189

e: enquiries@cis.strath.ac.uk

# **TAUGHT COURSES**

- · Advanced Computer Science
- Advanced Computer Science with Artificial Intelligence

- Advanced Computer Science with Data Science
- Advanced Software Engineering
- Digital Health Systems
- · Information and Library Studies
- · Information Management
- Software Development
- Quantitative Finance (offered in collaboration with the Departments of Mathematics & Statistics and Accounting & Finance, see pg 149 for course entry)
- · Artificial Intelligence and Applications

### **Contact for Taught Courses**

e: science-masters@strath.ac.uk

The Department of Computer and Information Sciences is an interdisciplinary school providing an innovative teaching and research environment. Research interests span the whole spectrum of computer and information sciences theory and application, from fundamental algorithms to information behaviour. Research is funded by the Research Councils (EPSRC, ESRC and AHRC), the EU, and various government agencies and industry bodies. We have a strong record of industrial and professional engagement and collaboration including partnerships with Microsoft, Rolls-Royce Marine and the European Space Agency.

The Department is the largest and oldest provider of postgraduate instructional and research training in Library and Information Studies in Scotland, and is a member of the iSchools group, a coalition of the world's leading information schools.

### **Research Areas**

Research activities are structured around six groups:

# **Strathclyde iSchool Research Group**

The Strathclyde iSchool Research Group (SiSRG) conducts internationally recognised research on information behaviour, information engagement, and interactive information retrieval. We investigate how people access information, how they use social media and other forms of information, and how information is used. We also study how to design information access systems such as retrieval systems, recommender systems, and conversational agents, and how to evaluate information access. We work across areas such as health, education, cultural heritage, and industrial information contexts and have a large and internationally-diverse PhD community.

# **Digital Health and Wellness**

Research interests and work of the group include looking at the full development lifecycle of truly person-centred digital health and wellness services and products. We have extensive experience of designing with, and for, patients, consumers, citizens, and health and social care professionals. We are working on several projects with charities, the NHS, industry and public sector bodies to develop usable and effective digital health and wellness products and services to reduce inequalities, improve people's lives and transform the way health and care is delivered and accessed globally.

# **Mathematically Structured Programming**

We use mathematics to understand the nature of computation, and to turn that understanding into the next generation of programming languages. Our research covers many topics in the mathematical foundations of Computer Science, including denotational semantics, (applied) category theory, type theory, functional programming, and logic. Our work goes beyond the traditional boundaries of computer science and brings abstract mathematics to bear on problems in biology, economics, medicine, machine learning and metrology.

# **Computer Science Education Research Group**

The Computer Science Education Research Group conducts research and undertakes scholarship activities on Computer Science learning and teaching, pedagogy, and innovation in higher and professional education. The group members have expertise in: the use of Artificial Intelligence in education, programming and learning difficulties, assessment and feedback, project supervision models, cyber security education, gamification and visualisation in education, blended and hybrid learning, student monitoring techniques, and improving programming education/understanding. We welcome UK and international PhD students with diverse and interdisciplinary interests who are interested in Computer Science education.

January 2024 start date available. Visit www.strath.ac.uk for full details.

# ADVANCED COMPUTER SCIENCE

**NSc** 

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Pursue a tailored programme through a flexible structure of optional classes

Opportunity to follow a specialist pathway leading to a specific named award

Skilled computer science professionals are in demand

# **Cybersecurity Group**

We take a holistic, interdisciplinary approach to cybersecurity and privacy, encompassing technical, human, societal and organisational perspectives. We collaborate with academics, industry, Government and third sector organisations to produce internationally-recognised qualitative and quantitative research across a wide range of topics, including:

- Human factors and human behaviours in security and privacy; Trust, identity and anonymity; Cyber safety and diplomacy; Cybersecurity and Society
- Cybercrime, measurement and policy;
   Security economics, law and regulation
- Cyber-Physical Systems; Botnets, malware and intrusion analysis; Side channels
- Network and communication systems;
   Resilience of software-defined networks
   and critical Infrastructures
- Digital forensics; Applied crypto and cryptanalysis

We welcome UK and international PhD students with diverse and interdisciplinary interests.

# **Human Centric Al Research Group**

- we develop new and innovative approaches to Al-based problem solving to ensure solutions are explainable, trusted and acceptable by those users who are ultimately responsible for the decisions
- we reverse the tables and rather than expect humans to fit around Al-systems, we ask how can Al fit into human-centric decision systems
- we close the gap between humans and Alsystems by extending the latter to cover the vital area of human intelligence in problem solving where current Al-systems perform poorly
- we build persistently autonomous systems that are able to act both reasonably and robustly in real-time, challenging environments
- we work on developing Al-based multimedia processing and communications for 6G mobile applications

# 

# **Compulsory Classes**

- Legal, Ethical and Professional Issues for the Information Society
- · Research Methods

### **Optional Classes**

Students have the flexibility to build their own specialist pathway by selecting 100 credits from the following list:

- · Advanced Topics in Software Engineering
- Big Data Technologies
- Deep Learning Theory and Practice
- Designing Usable Systems
- Information Retrieval
- Project Management OR Software Architecture and Design
- Distributed Information Systems
- Game Theory and Multi-Agent Systems
- Mobile Software Applications
- Machine Learning for Data Analytics
- Evolutionary Computing for Finance
- Business Analysis

# 

Students also undertake an individual research project.

# 

12 months full-time

# 

Second-class Honours degree, or overseas equivalent, in computer science or a closely-related mathematical or engineering discipline.

Significant programming experience.

# ADVANCED COMPUTER //// SCIENCE WITH /////////// ARTIFICIAL INTELLIGENCE

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Course designed to meet the growing worldwide demand for skilled computer science professionals who have expertise in artificial intelligence

You'll develop an understanding of how artificial intelligence algorithms and technologies are designed, developed, optimised and applied to meet business objectives

You'll learn how to apply rigorous AI methodologies through experimental design and exploratory modelling

# 

# **Compulsory Classes**

- Legal, Ethical and Professional Issues for the Information Society
- Quantitative Methods for Artificial Intelligence
- Deep Learning Theory and Practices
- · Reasoning for Intelligent Agents
- Deep Learning In Visual Computing Applications
- Game Theory and Multi-Agent Systems
- Research Methods

### Optional Classes (30 credits from)

- · Advanced Topics in Software Engineering
- Big Data Tools and Techniques
- Information Retrieval
- Mobile Software Applications
- Evolutionary Computing for Finance
- Distributed Information Systems
- Fundamentals of Machine Learning for Data Analytics
- Business Analysis
- Al for Finance

# 

Students also undertake an individual research project.

### 

12 months full-time

# 

Second-class Honours degree, or overseas equivalent, in computer science or a closely-related mathematical or engineering discipline.

Significant programming experience.

January 2024 start date available. Visit www.strath.ac.uk for full details.

MS

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain skills to meet the challenges posed by the advent of the big data revolution

Understand how classical statistical techniques are applied in modern data analysis

Work on a research project with our industrial partners

# 

# **Compulsory Classes**

- Legal, Ethical and Professional Issues for the Information Society
- Distributed Information Systems
- Deep Learning Theory and Practice
- Machine Learning for Data Analytics
- Research Methods

# Optional Classes (40 credits from)

- · Advanced Topics in Software Engineering
- Mobile Software Applications
- · Evolutionary Computing for Finance
- Big Data Tools and Techniques
- Information Retrieval
- Business Analysis

# 

Students also undertake an individual research project.

## 

12 months full-time

# ENTRY REQUIREMENTS //////////////////////

Second-class Honours degree, or overseas equivalent, in computer science or a closely-related mathematical or engineering discipline.

Significant programming experience.

January 2024 start date available. Visit www.strath.ac.uk for full details.

# ADVANCED SOFTWARE /////ENGINEERING

**MSc** 

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop the skills to design and deploy sophisticated modern software systems

Enhance your existing practical software engineering skills

Learn new theories of software development

# 

# **Compulsory Classes**

- Legal, Ethical and Professional Issues for the Information Society
- Research Methods

# Optional Classes (100 credits from)

- · Advanced Topics in Software Engineering
- · Designing Usable Systems
- Big Data Technologies
- Project Management OR Software Architecture and Design
- · Distributed Information Systems
- Mobile Software Applications

### 

Students also undertake an individual research project.

# 

12 months full-time

# ENTRY REQUIREMENTS //////////////////////

Second-class Honours degree, or overseas equivalent, in computer science or a closely-related mathematical or engineering discipline.

Significant programming experience.

# 

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

A course in modern Artificial Intelligence, with a focus on intelligent agents and machine learning

Artificial Intelligence and machine learning skills in wide demand

No previous experience of computer science necessary

# 

# **Compulsory Classes**

- Al for Autonomous Agents
- Deep Learning and Neural Networks
- Big Data Technologies
- Machine Learning for Data Analytics
- Al for Finance
- Quantitative Methods for AI
- Legal, Ethical and Professional Issues for the Information Society

# 

Students also undertake an individual research project.

### 

12 months full-time

# ENTRY REQUIREMENTS //////////////////////

Second class honours degree, or overseas equivalent.

# DIGITAL HEALTH SYSTEMS WWW.

# MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Become a leader in the field of health IT

Learn how to manage and analyse data collected from personal devices and large-scale health systems

Develop software development and management skills to support planning and delivery of better care systems

Accredited by the Chartered Institute of Library and Professionals

# 

### **Compulsory Classes**

- Database Fundamentals
- Research Methods
- Health Information Governance
- Decision Support and Health Analytics
- Digital Health Implementation
- Design of Usable Health Systems
- Health Ageing

# Optional Classes (20 credits from)

- Managing Healthcare Operations
- · Health Economics and Evaluation
- Big Data Fundamentals

# 

Students also undertake an individual research project.

# 

12 months full-time

### 

Second-class Honours degree, or overseas equivalent. Consideration may also be given to those holding other qualifications in relevant disciplines.

# INFORMATION MANAGEMENT

### MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Accredited by the Chartered Institute of Library and Information Professionals

Opportunity to gain practical business analysis experience via an industrial engagement project

Partial Accreditation by the British Computer Society

### 

# **Compulsory Classes**

- Project Management
- Database and Web Systems Development
- Information Law
- Research Methods
- Business Analysis
- · Information Retrieval
- Big Data Technologies
- Machine Learning for Data Analytics

# 

Students also undertake an individual research project.

# 

12 months full-time

### 

Second-class Honours degree, or overseas equivalent. Consideration may also be given to those holding other qualifications in relevant disciplines. developed an understanding and appreciation of academic research, machine learning and optimisation algorithms, static and dynamic analysis, frameworks and programming styles, and semantic web.

**Jossy George** 

MSc Advanced Computer Science graduate

# INFORMATION AND // LIBRARY STUDIES ///

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Accredited by the Chartered Institute of Library and Information Professionals, incorporating international reciprocal agreements with professional bodies in the US, Canada, Australia and New Zealand

Benefit from practical experience of a placement

### 

# **Compulsory Classes**

- Information Retrieval and Access
- Information Law
- Research Methods
- Library Technology and Systems
- Information Analysis
- Organisation of Knowledge
- · Libraries, Information and Society
- Human Information Behaviour

# 

Students also undertake an individual research project.

# 

Students will have a placement one day per week during a semester, and providers include Glasgow Life, the National Library of Scotland, the BBC, Scottish Enterprise, NHS Scotland, as well as university and special libraries.

### 

12 months full-time

### 

Second-class Honours degree, or overseas equivalent.

# SOFTWARE //////// DEVELOPMENT

MSc

# WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Provides a pathway into one of the most in-demand professional job sectors for graduates without a computing science background

Focus on programming skills for software engineering, mobile and web applications, and computer security

Partial Accreditation by the British Computer Society

### 

### **Compulsory Classes**

- Introduction to Programming Principles
- Object Oriented Programming
- Mobile Application Development
- Software Engineering
- Computer Security Fundamentals
- Database Fundamentals
- Database Development
- Legal, ethical and professional issues for the information society

# 

Students also undertake an individual research project.

# 

12 months full-time

# 

Second-class Honours degree, or overseas equivalent, in any discipline other than Computer Science.

# DEPARTMENT OF MATHEMATICS & STATISTICS

## **RESEARCH DEGREES**

MPhil, PhD

## Contact for Research Degrees

t: +44 (0)141 548 3382

e: ma-pgrapplications@strath.ac.uk

### **TAUGHT COURSES**

- Actuarial Science (on campus)
- Applied Statistics (on campus and online)
- Applied Statistics in Health Sciences (on campus and online)
- Applied Statistics in Finance (on campus and online)
- Applied Statistics with Data Science (online)
- Quantitative Finance (on campus)

## **Contact for Taught Courses**

e: science-masters@strath.ac.uk

The Department of Mathematics and Statistics is one of the largest of its kind in Scotland, with an international reputation in the use of mathematical analysis for real-world problems. The Department has collaborative links with researchers in other universities, from other disciplines and from the industry charity, business and government sectors, in the UK, Europe, the USA and China.

Funding comes from a range of sources including the Engineering and Physical Sciences Research Council, the Carnegie Trust, the Leverhulme Trust, Cancer Research UK, University Scholarship Awards, UK industry and the EU.

## **Research Areas**

We have major research themes in the areas of industrially-relevant mathematics, numerical algorithm development, statistics for the health sciences, modelling of marine systems, and the development of novel techniques for stochastic and network analysis.

Research activities are focused in three independent groups: Analysis, Continuum Mechanics and Industrial Mathematics, and Population Modelling and Epidemiology.

## **Analysis**

The interdisciplinary work in the Analysis group includes development of new mathematical and computational tools as well as wide-ranging applications.

## **Theme: Applied Analysis**

Innovative work in smart and nano-materials technologies involves computational models that lead to fundamental mathematical questions (existence and well-posedness, stability, qualitative properties of solutions) that fall within the remit of Applied Analysis. Research activities are focused on:

- Spectral Analysis
- Coagulation-fragmentation Equations
- Homogenisation Theory
- Network Modelling
- Mathematical Ecology

## **Theme: Numerical Analysis**

Numerical Analysis group is one of the largest and most highly regarded groups of its kind in the UK. Their research is focused on the construction and analysis of computational methods for algebraic and differential equations arising in a wide variety of application areas, equipping them to make important contributions across all the University's strategic research themes. Current examples include:

- Measurement Science & Enabling Technologies (regarding sensor networks with NPL)
- Advanced Manufacturing & Materials (regarding electric heating in collaboration with the AFRC)
- Ocean, Air & Space (regarding unsteady vortexdominated flows)

## **Theme: Stochastic Analysis**

Research by the Stochastic Analysis group on stochastic differential equation (SDE) models for option values in energy markets, stochastic numerical solutions for nonlinear energy models, and time-series models for financial data contributes across many of the University's strategic research themes, notably Energy and Health & Wellbeing. Research interests cover:

- Stochastic Differential Equations
- Stochastic Computation
- Time Series
- Probability Theory
- Image Analysis

## **Theme: Combinatorics**

The group's research interests are in enumerative, bijective, algebraic and topological combinatorics, with connections to theoretical computer science, physics and graph theory. There is a particular focus on research in:

- Combinatorics
- Graph Representations
- The Abelian Sandpile Model
- Combinatorial Counting Sequences
- Asymmetric Exclusion Processes
- Uniform Resource Distribution

## Continuum Mechanics and Industrial Mathematics

Research in the group focuses on the development and analysis of mathematical models for a wide range of real-world problems ranging from the flow of complex fluids and microfluidics to geophysical applications and using ultrasonic waves to detect cracks in engineering structures. Group members have expertise in continuum mechanics, material science, fluid dynamics, and soft matter modelling. The work is naturally multidisciplinary, and group members use a variety of analytical and numerical techniques to undertake collaborative research with physicists, engineers, chemists and industrial companies on a diverse range of exciting applications. In particular, the group has an international reputation for its cutting-edge work on the mathematical analysis of liquid crystals.

## **Health and Ecology Modelling**

The research conducted in this group relates directly to the University's strategic research themes in Health & Wellbeing and Society & Policy. There are two main themes of work – Health Statistics and Mathematical Ecology, incorporating Marine Population Modelling, and we are using statistics and modelling to address important topics such as the coronavirus epidemic and climate change impact on marine systems.

Activity in Health Statistics contributes to minimising the impact of infectious diseases and emerging zoonotic diseases, through vaccination strategies, understanding the transmission and intervention strategies for plant health, and modelling the risks to society from infections from animals entering the food chain. One distinctive aspect of this work comes from strong and long-standing strategic links with external public health agencies such as Health Protection Scotland (HPS), NHS Greater Glasgow and Clyde, and the Animal and Plant Health Agency (APHA).

The Marine Population Modelling group is engaged in research on a wide variety of topics in marine resource modelling and ecology. Recent work includes the development of novel and computationally highly efficient population models combining both spatial and biological structure for Calanus finmarchicus, an important zooplankton. This approach allows physiologically structured models (PSM) to be fitted to very large-scale, spatio-temporal data sets for the first time, a most important practical advance. The MPM group has enjoyed a long, successful relationship with Marine Scotland. However, we also work in collaboration with empirical scientists from a variety of institutions and participate in large multi-university projects. The MPM group is also a partner in the Marine Alliance for Science and Technology Scotland (MASTS).

## **Current Projects**

- Implementing spatial models for air pollution in central Scotland to investigate the link between atmospheric sulphur dioxide and health problems
- Modelling the epidemiology of SARS-CoV2 in Scotland, providing key advice to the Chief Medical Officer in Scotland
- Designing and setting up the national surveillance system for HPV infection to assess the impact of the HPV vaccine and using it to run epidemiological studies
- The development of PSMs of fish populations, i.e. models which attempt to reproduce the underlying biological processes of individual animals, allowing for environmental, spatial and genetic variation between them. These are used to consider spatially explicit population dynamics, genetic differentiation, and complex multi species interactions

## ACTUARIAL SCIENCE

MSc (On Campus)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Conversion course for those with a background in a wide range of quantitative disciplines. Gain a strong foundation for the understanding of actuarial theory and analysis

Prepare for a career in the financial services industry with a quantitative and data facing role

Learn about the nature and functioning of the economy, financial markets and institutions

## 

This cross-faculty programme is delivered in collaboration with Strathclyde Business School.

## **Compulsory Classes**

- · Foundations of Probability and Statistics
- Principles of Finance
- Inference and Regression Modelling
- · Fundamentals of Macroeconomics
- Fundamentals of Microeconomics

## **Optional Classes include**

- Behavioural Finance
- Security Analysis
- · Portfolio Theory and Management
- Risk Management for Banks
- · Financial Econometrics
- Financial Stochastic Processes
- Bayesian Spatial Statistics
- Quantitative Risk Analysis
- Risk Analysis and Management
- Machine Learning for Data Analytics
- Evolutionary Computation for Finance

## 

Students also undertake an individual research project which may involve working with one of our industrial collaborators. An industry-based project can be based in the UK or abroad.

## 

12 months full-time

## 

Second-class Honours degree, or international equivalent in engineering, physics, chemistry, computing science, business studies, accounting, economics or other quantitative subject. Applications are also welcome from those with appropriate professional qualifications or those who can demonstrate relevant practical experience. Strong mathematical ability is required.

January 2024 start date available (online only).
Visit www.strath.ac.uk for full details.

## **APPLIED STATISTICS**

MSc (On Campus and Online)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Conversion course for those with a background in a broad range of disciplines

Gain skills in statistical programming in R, data analysis, statistical modelling and data visualisation

Learn to interpret and report the results from data analyses

## 

Train as an applied statistician without previously having studied statistics. This course is taught by academics who also work for the Government and the National Health Service (NHS).

## **Compulsory Classes**

- Foundations of Probability and Statistics
- Data Analytics in R
- · Experimental Design
- Multivariate Analysis

## **Optional Classes**

- Quantitative Risk Analysis
- Survey Design and Analysis
- Bayesian Spatial Statistics
- Effective Statistical Consultancy
- Financial Econometrics
- Financial Stochastic Processes
- Data dashboards with R Shiny
- Business Analytics (on campus only)
- Risk Analysis and Management (on campus only)
- Optimisation for Analytics (on campus only)
- Medical Statistics

## 

You undertake a research project in which you will work on a real-life data set, putting the theoretical skills you have learned into practice.

## 

12 months full-time (on campus); 24 or 36 months part-time (online).

## 

Second-class Honours degree, or international equivalent. Mathematical training to A Level, or equivalent standard. Pre-sessional Mathematics online module available (contact us for further details). Applications from prospective students with relevant experience or appropriate professional qualifications are also welcome.

January 2024 start date available.
Visit www.strath.ac.uk for full details.

## APPLIED STATISTICS WITH DATA SCIENCE

MSc (Online)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Conversion course, with specialisation in data science, for those with a background in a broad range of disciplines

Gain skills in statistical programming in R and Python, big data technologies, cloud storage systems and data analysis

Learn to interpret and report the results of data analyses

## 

The course is taught by academics who also work for the Government and the National Health Service (NHS).

## **Compulsory Classes**

- Foundations of Probability and Statistics
- Data Analytics in R
- Statistical Modelling and Analysis
- Big Data Fundamentals
- Big Data Technologies

## **Optional Classes**

- Quantitative Risk Analysis
- Survey Design and Analysis
- Medical Statistics
- Bayesian Spatial Statistics
- Data dashboards with R Shinv
- Effective Statistical Consultancy
- Financial Stochastic Processes
- Financial Econometrics

## 

You undertake a research project in which you will work on a real-life data set, putting the theoretical skills you have learned into practice.

## 

24 or 36 months part-time (online)

## 

Second-class Honours degree, or overseas equivalent. Mathematical training to A Level, or equivalent standard. Pre-sessional Mathematics online module available (contact us for further details). Applications from prospective students with relevant experience or appropriate professional qualifications are also welcome.

January 2024 start date available (online only).
Visit www.strath.ac.uk for full details.

## APPLIED STATISTICS IN FINANCE

MSc (On Campus And Online)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Conversion course, with application in finance, for those with a background in a broad range of disciplines

Gain skills in statistical programming in R, data analysis, statistical modelling and data visualisation

Learn to interpret and report the results of data analyses, specifically related to finance

## 

The course is taught by academics who also work for the Government and the National Health Service (NHS).

## **Compulsory Classes**

- · Foundations of Probability and Statistics
- Data Analytics in R
- · Experimental Design
- Multivariate Analysis
- Financial Econometrics
- · Financial Stochastic Processes

### **Optional Classes**

- Quantitative Risk Analysis
- Survey Design and Analysis
- Medical Statistics
- Bayesian Spatial Statistics
- Data dashboards with R Shiny
- Effective Statistical Consultancy
- Business Analytics (on campus only)
- Risk Analysis and Management (on campus only)
- Optimisation for Analytics (on campus only)

## 

You undertake a research project in which you will work on a real-life data set, putting the theoretical skills you have learned into practice.

## 

12 months full-time (on campus); 24 or 36 months parttime (online).

## 

Second-class Honours degree, or overseas equivalent. Mathematical training to A Level, or equivalent standard. Pre-sessional Mathematics online module available (contact us for further details). Applications from prospective students with relevant experience or appropriate professional qualifications are also welcome.

January 2024 start date available (online only).
Visit www.strath.ac.uk for full details.

## APPLIED STATISTICS IN HEALTH SCIENCES



MSc (On Campus And Online)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Conversion course, with application in the health sciences, for those with a background in a broad range of disciplines

Gain skills in statistical programming in R, data analysis, statistical modelling and data visualisation

Learn to interpret and report the results of data analyses, specifically related to problems in health sciences

## 

The course is taught by academics who also work for the Animal and Plant Health Agency (APHA), the Government and the National Health Service (NHS).

## **Compulsory Classes**

- Foundations of Probability and Statistics
- Data Analytics in R
- Experimental Design
- Multivariate Analysis
- Medical Statistics

## **Optional Classes**

- Bayesian Spatial Statistics
- Effective Statistical Consultancy
- Quantitative Risk Analysis
- Survey Design and Analysis
- Data dashboards with R Shiny

## 

You undertake a research project in which you will work on a real-life data set, putting the theoretical skills you have learned into practice. It is possible to work with APHA and the NHS on one of their policy-driven problems.

## 

12 months full-time (on campus); 24 or 36 months part-time (online).

## 

Second-class Honours degree, or international equivalent. Mathematical training to A Level, or equivalent standard. Pre-sessional Mathematics online module available (contact us for further details). Applications from prospective students with relevant experience or appropriate professional qualifications are also welcome.

## **QUANTITATIVE FINANCE**

MSc (On Campus)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain an understanding of financial theory and analysis, financial markets, numerical methods in finance and programming for financial applications

Designed with input from the finance industry

Opportunity to undertake industry-based project

Designed for those with a strong aptitude for mathematics, statistics and computing who haven't studied these topics in detail before

## 

This cross-faculty programme draws on expert input from three departments – Accounting & Finance, Mathematics & Statistics, and Computer & Information Sciences.

## **Compulsory Classes**

- Foundations of Mathematical and Statistical Finance
- Principles of Finance
- International Financial Markets and Banking
- Big Data Technologies

## Optional Classes include (one to be chosen from each list)

## List A

- Behavioural Finance
- · Security Analysis
- Portfolio Theory and Management
- Derivatives and Treasury Management

### List B

- Database and Web Systems Development
- · Machine Learning for Data Analytics
- Evolutionary Computation for Finance

## List C

- Financial Stochastic Processes
- Financial Econometrics
- Networks in Finance

## 

Students also undertake an individual research project which may involve working with one of our industrial collaborators.

## 

12 months full-time

## 

Second-class Honours degree, or overseas equivalent, in engineering, physics, chemistry, computing science, business studies, accounting, economics; mathematical training to A Level or equivalent standard. Applications are also welcome from those with appropriate professional qualifications, or those who can demonstrate relevant practical experience. Strong mathematical ability is required.

# DEPARTMENT OF PHYSICS

## **RESEARCH DEGREES**

MRes, MPhil, PhD

Contact for Research Degrees

e: physics-pgr-enquiries@strath.ac.uk

## **TAUGHT COURSES**

- · Advanced Physics
- · Applied Physics
- Nanoscience
- Photonics
- · Quantum Technologies

## **Contact for Taught Courses**

e: science-masters@strath.ac.uk

The Department is engaged with exciting projects at the forefront of Physics research, from teasing out the fundamental properties of the Universe to spearheading market-driven device-oriented interdisciplinary projects.

We are developing disruptive technologies from basic physics that have the potential to revolutionise healthcare in the future, or solve the energy crisis. Many of our researchers have received national and international recognition of their contributions to science.

Recent major developments include the establishment of, and leading role for the Department in an international Max Planck Partnership in Measurement at the Quantum Limit, and the first UK Fraunhofer Research Centre, the Centre for Applied Photonics.

The Department is a member of SUPA (the Scottish Universities Physics Alliance), a research collaborative initiative across Scottish Physics departments and a pan-Scotland Graduate School in Physics. It is also involved in the SULSA, SINAPSE and MASTS research pooling initiatives and is a partner in the Cockcroft Institute of Accelerator Science and Technology.

The Department is also a major player in the recent UK initiative to exploit quantum technologies. It is the only Department in the UK to be involved in all four of the Quantum Hubs that were established in 2015 and renewed in 2019. In addition, the Department is playing a key role in the management of the scientific direction of the National Physical Laboratory (NPL), a world-renowned body for physical standards.

## Research Divisions Nanoscience

The Nanoscience division reflects the broad range of scientific areas in which nanotechnology is destined to make an impact on our lives. The division comprises:

- Physics of Life Sciences Group researchers are interested in the building blocks of life such as molecules, proteins, nanoparticles or microorganisms, which have relevance from the molecular basis of health to life in the sea as well as super-resolution and nonlinear microscopy
- Semiconductor Spectroscopy and Devices Group

   combines studies of optical processes in advanced semiconductor materials and the realisation of practical optoelectronic devices

## **Optics**

The Optics division concentrates on quantum optics, both experimental and theoretical, and the expertise that has been attracted to the division is being used to form both international and UK-wide research links through the Max Planck Partnerships, the Quantum Hubs and the University's management of NPL. Central to this is our work in the understanding and exploitation of the foundations of quantum optics. The division includes a theoretical research group — Computational Nonlinear and Quantum Optics, and an experimental group — Experimental Quantum Optics and Photonics:

- Computational Nonlinear and Quantum Optics

   investigates problems associated with the fundamentals of light-matter interactions, many-body physics, simulations of nonlinear optical devices, non-equilibrium dynamics of quantum gases and quantum computing
- Experimental Quantum Optics and Photonics

   researchers explore the entire research field from the fundamental interactions of single atoms and photons, through to applied research in spectroscopy and application of our techniques to new quantum technologies

## **Plasmas**

The Plasmas division is the largest centre for plasma physics research in Scotland. It is the location for the Scotlish Centre for the Application of Plasma-based Accelerators and was a partner in the EPSRC Centre for Doctoral Training in Next Generation Accelerators. The Plasmas division comprises:

- Atoms, Beams and Plasmas Group research is broadly based on free electron physics, accelerator science, plasma physics and atomic and molecular spectroscopy; current topics include free electron physics, particle accelerator technology, plasma physics, atomic and molecular spectroscopy
- Strathclyde Intense Laser Interaction Studies Group

   investigates radiation-beam-plasma interactions at
  large field intensities for the production of high-energy
  particle beams (electrons, protons, ions) and high
  brightness radiation pulses (X-rays, gamma-rays, THz)

## **Institute of Photonics**

The Institute's key objective is to bridge the gap between academic research and industrial application and development through excellence in commercially-relevant research and its exploitation. It is closely linked to the recently-established UK Fraunhofer Research Centre for Applied Photonics. We seek to establish ongoing relationships with companies, providing research capabilities which both complement and supplement their internal research activities. Current research themes are:

- laser and LED sources
- solid-state lasers
- diamond Raman lasers
- VECSELs
- · microLED and nanoLED arrays
- hybrid organic-inorganic photonics
- · optogenetics and biophotonics

We are a research-intensive unit and postgraduate student training is one of our core activities. As a result of the multidisciplinary nature of photonics, many of our students are jointly supervised with academic colleagues from other departments, such as Pure and Applied Chemistry or Biomedical Engineering. The Institute provides a friendly and supportive environment for a large number of postgraduate students.

## ADVANCED PHYSICS ///

## MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Focus on topics such as theoretical physics, quantum information, plasma physics and solid state physics

Choose taught elements relevant to your career interests

Gain transferable, problem-solving and numeracy skills

## 

## **Compulsory Classes**

Physics Skills

## **Optional Classes**

- Introductory Nanoscience
- Advanced Nanoscience 1 & 2: Imaging & Microscopy/ Solid State Nanoscience
- Topics in Photonics: Laser & Nonlinear Optics
- Advanced Topics in Photonics: Ultrafast Physics & Plasmas
- Photonics Materials & Devices
- · Advanced Photonics Devices
- Advanced Topics in Quantum Physics Quantum Technologies
- Advanced Topics In Electromagnetism and Plasma Physics
- Topics in Quantum Physics
- Computational Physics
- Experimental Laboratories
- Advanced Topics in Quantum Optics

## 

Students also undertake an individual research project.

## 

12 months full-time

## 

Second-class Honours degree, or overseas equivalent, in physics or a related subject.

Other qualifications, including industrial experience, may be considered.

## APPLIED PHYSICS

## MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Acquire knowledge of the techniques, practices and theoretical background within applied physics and its interdisciplinary applications

Specialise in subjects such as microwave technology, laser-based acceleration, nanoscience and applied solid-state physics

## 

## **Compulsory Classes**

Physics Skills

### **Optional Classes**

- · Photonic Systems
- Control Principles
- Computational Physics
- Experimental Laboratories
- Introductory Nanoscience
- Advanced Nanoscience 1 & 2: Imaging & Microscopy/ Solid State Nanoscience
- Topics in Photonics: Laser and Nonlinear Optics
- Optical Design
- Advanced Topics in Photonics: Ultrafast Physics and Plasmas
- · Photonics Materials and Devices
- Advanced Photonics Devices
- Advanced Topics In Electromagnetism and Plasma Physics

## 

Students also undertake an individual research project, typically in a university laboratory. Students with interest in an industrial placement and appropriate qualification will be supported to find an internship at one of our industrial partners to work on their project in an industrial R&D environment.

## 

12 months full-time

## 

Second-class Honours degree, or overseas equivalent, in physics or a related subject.

Other qualifications, including industrial experience, may be considered.

Consistently among the top universities for research output. This environment was exactly what an aspiring researcher like me was looking for.

**Siddharth Rangnekar** MSc Advanced Physics student

## 

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Master state-of-the-art research and methods in nanoscience in a course which combines nanoscience fundamentals with interdisciplinary applications in chemistry and life sciences

Become equipped for a research-based career in industry or to progress to a PhD

## 

## **Compulsory Classes**

- Physics Skills
- Conversion Course
- Introductory Nanoscience
- Advanced Nanoscience 1: Imaging and Microscopy
- Advanced Nanoscience 3: Nanochemistry

## **Optional Classes**

- Experimental Laboratories
- Advanced Nanoscience 2: Solid State Nanoscience

## 

Students undertake a research-intensive project in a relevant nanoscience topic. Projects take place primarily in research labs associated with nanoscience located in the University's physical science departments; there may also be opportunities for relevant industrial placements.

## 

12 months full-time

## 

Second-class Honours degree, or overseas equivalent, in physics, chemistry or a related subject.

Other qualifications, including industrial experience, may be considered.

## 

## MS

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain background knowledge, skills and hands-on experimental research experience in modern optics and photonics

Suitable for those with a science or engineering background wanting to gain a vocational degree

Establish a foundation for an optics and photonics related PhD or industrial PhD

## 

## **Compulsory Classes**

- · Physics Skills
- Photonics: Laser and nonlinear optics
- Advanced Photonic Devices

## **Optional Classes**

- Research Skills
- Introductory Nanoscience
- Optical Design
- Control Principles
- Computational Physics

**Experimental Laboratories** 

- Advanced Topics in Photonics: Ultrafast Physics and Plasmas
- Advanced Topics in Quantum Optics
- Photonics Materials and Devices
- Optical Communication (Photonic Systems)
- Advanced Nanoscience: Imaging and Microscopy

## 

Students undertake an individual research project, typically in an university laboratory. Students with interest in an industrial placement and appropriate qualification will be supported to find an internship at one of our industrial partners to work on their project in an industrial R&D environment.

## 

12 months full-time

## 

Second-class Honours degree, or overseas equivalent, in physics or a related subject.

Other qualifications, including industrial experience, may be considered.

## QUANTUM TECHNOLOGIES ///

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Building on the particular research strength of the department in quantum physics and quantum technologies, develop theoretical and practical skills in fundamentals of quantum physics and their applications to quantum technologies

Prepare for further postgraduate study and the rapidly developing field of industrial R&D in quantum technologies

## 

## **Compulsory Classes**

- · Physics Skills
- Topics in Quantum Physics
- Topics in Photonics: Laser & Nonlinear Optics
- Advanced Topics in Quantum Physics Quantum Technologies

## **Optional Classes**

- Advanced Nanoscience 1: Imaging & Microscopy
- · Advanced Experimental Laboratories
- Topics in Atomic, Molecular and Nuclear Physics

## 

Students undertake an individual research project, typically in a university laboratory. Students with interest in an industrial placement and appropriate qualification will be supported to find an internship at one of our industrial partners to work on their project in an industrial R&D environment.

## 

12 months full-time

## 

Second-class Honours degree, or overseas equivalent, in physics or a related subject.

Other qualifications, including industrial experience, may be considered.

# DEPARTMENT OF PURE AND APPLIED CHEMISTRY

## **RESEARCH DEGREES**

MPhil, PhD

Contact for Research Degrees

e: pg-application.chemistry@strath.ac.uk

## **TAUGHT COURSES**

- Forensic Science
- Fundamentals in Forensic Science

## Contact for Taught Courses

e: science-masters@strath.ac.uk

## **Our Research**

The Department of Pure and Applied Chemistry is one of the largest chemistry research schools in the UK. Our research spans a very wide range of topics from analytical chemistry to materials science and from biological chemistry to theoretical chemistry. Research is well supported by industry, government, research councils, the EU and charitable foundations. We are part of WestCHEM, the joint research school of the University of Strathclyde and the University of Glasgow, with whom we work on many areas of chemistry research.

### **Research Areas**

You can study for a PhD or MPhil in any of our key research areas:

## Bionanotechnology and Analytical Chemistry

Research in Bionanotechnology and Analytical Chemistry is broad-ranging. Our bionanotechnology research is focused on the application of nanoscience to solve biological problems most notably with applications in healthcare. There is significant critical mass in the study and the application of surface enhanced Raman scattering and functionalisation of nanoparticles to create new clinical diagnostics and therapeutics. We have expertise in imaging, in particular Raman and advanced Raman Techniques e.g. SRS, CARS, plasmonic sensors, the development of peptides as biological mimics, drug delivery and the application of new chemiluminescence approaches to biological measurements. Our analytical research is focussed on process analytical chemistry and environmental chemistry. Atomic and molecular spectrometry, chemometrics, chromatography, materials analysis and optical spectroscopies are used extensively in the development of these areas. Our specific skills lie in accurate analytical measurement of molecules, developing new instrumentation and techniques, development of bioanalytical assays, imaging and chemical reagents for use in rapid and highly sensitive detection approaches.

## **Catalysis and Synthesis**

We design novel reactions, both using metal-free reagents and metal-based transformations, for applications in synthesis. We have additional strengths in mechanistic studies, the synthesis of complex natural products, and main group chemistry including the emerging area of synergistic bimetallic chemistry. We have strong international links and partnerships with more than 25 companies, including AstraZeneca, Syngenta and Huntsman, and a special partnership with GlaxoSmithKline (GSK).

## **Chemical Biology and Medicinal Chemistry**

Research in chemical biology and medicinal chemistry encompasses a broad spectrum of interests from the delivery of chemical tools to underpin and advance basic biology to the application of knowledge in drug discovery. Our links with Strathclyde Institute of Pharmacy and Biomedical Sciences have developed our outstanding track record in innovation and delivery at all stages of the drug discovery pipeline. Molecular and biological sciences are fully integrated with the medical and veterinary science across several institutions in Glasgow including the University of Strathclyde, the University of Glasgow and the Beatson Institute for Cancer Research.

## **Materials and Computational Chemistry**

The Materials and Computational Chemistry research section is engaged on a diverse range of chemistry research topics, with a strong emphasis on applied, multidisciplinary research projects for the benefit of society. The group has a proven track record of working collaboratively with academia and industry in areas such as energy, polymer science (synthesis, processing and degradation), bionanotechnology, electronics, biophysical chemistry, soft matter, porous materials, magnetic materials, catalysis, sensors, diagnostics, healthcare and the food industry. The activities of the section encompass organic and inorganic synthetic chemistry for the development of functional materials and devices, pioneering research into structure-property relationships and the development and the exploitation of state-of-the-art computational methods to solve chemical problems. The research work of the section is backed-up by a substantial suite of advanced materials characterisation and computational facilities.

## **Centre for Forensic Science**

The Centre for Forensic Science (CFS) is internationally recognised as a centre of excellence in forensic science education, research, policy and practice. In addition to undergraduate and postgraduate education, the Centre has provided training in forensic science to the police and scientists worldwide.

The Centre is a recognised leader in research in forensic science and works in close collaboration with partners in operational forensic science laboratories. CFS members have published extensively in peer-reviewed journals in the forensic science domain.

Research within the Centre has an emphasis on the development of techniques for solving current and future forensic science-related problems with an end-user operational focus. The biology-based research includes aspects of DNA analysis including recovery and analysis of degraded DNA, and the use of RNA and DNA to explore aspects of body fluid identification and ageing.

Further research strengths include the application of novel electrochemical methods to samples of forensic science relevance, and the development of policy relating to the effective use of forensic science and the interface of science and law. This encompasses the social and legal aspects of forensic science and the effective use of forensic science in major and volume crime.

## **Education, Research and Scholarship**

As a department, we strive to provide optimised teaching and learning environments to support our students, ensuring an outstanding student learning experience is sustained across our on campus and online programmes at both undergraduate and PG levels. This approach drives high-quality education research and scholarship to ensure our practice, learning platforms, practical activities, graduate attributes, employability skills, and assessment methods are research-informed.

Our ethos to education research and scholarship is also directed externally, to support our various stakeholders, partners, and the wider public. For example, we actively collaborate with school teachers to support their pedagogy and practice and deliver research-informed science communication.

Education-based research is embedded into the operation of our dedicated teaching school and is supported by dedicated teaching-focused academic members of staff and PGR students who also contribute to various research themes that include:

- Education for Sustainable Development
- Pedagogy and Practice
- Careers Education
- Science Communication and Research

## FORENSIC SCIENCE

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Strathclyde ranked no 1 for Forensic Science in the UK in the Complete University Guide 2024

Longest running MSc Forensic Science course in the UK

Accredited by the Chartered Society of Forensic Sciences

Participate in a major practical crime scene and courtroom exercise

Input by forensic practitioners and professional scientists

## 

### Semester 1

The first semester covers core aspects of forensic science including:

- · crime scene investigation
- · legal procedures and the law
- · interpretation and statistical evaluation of evidence
- forensic analysis of a range of biological and chemical evidence types

### Semester 2

You can choose to specialise in either forensic biology or forensic chemistry, studying a range of topics including:

## **Forensic Biology**

- · investigation of assaults and sexual offences
- biological trace evidence
- DNA profiling

## **Forensic Chemistry**

- analysis of fires and explosives
- drugs of abuse
- alcohol and toxicology

## 

The three-month project may be undertaken in the university research laboratories. There are also opportunities for some students to be based externally at a forensic science laboratory, in a company or at another university, in the UK or overseas.

## 

12 months full-time

## 

Second-class Honours degree, or overseas equivalent, in a relevant science subject such as chemistry, biology, biochemistry, pharmacy, zoology or botany. Candidates with operational experience are also welcome to apply.

## FUNDAMENTALS IN FORENSIC SCIENCE

**PgCert** (Online)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Strathclyde ranked no 1 for Forensic Science in the UK in the Complete University Guide 2024

Acquire fundamental knowledge and skills in three core areas of forensic science – scene investigation, forensic examination and court reporting

Upskill in forensic science topics as part of continuing professional development

Choose to specialise in forensic biology or forensic chemistry to align with prior knowledge, background, area of interest and/or operational relevance

Online, part-time programme which allows flexibility to suit a wide range of learner needs

## 

### Semester 1

· Essentials of Forensic Science

## Semester 2

You can choose to specialise in either forensic biology or forensic chemistry:

## **Forensic Biology**

- DNA profiling
- Sexual offenses investigation
- Remote Practical Work in Forensic Biology

### OR

## **Forensic Chemistry**

- · Fire and explosives
- Toxicology
- · Remote Practical Work in Forensic Chemistry

## 

Forensic Science Remote Research Project

## 

12 months, part-time, online

## 

Minimum second-class Honours degree, or international equivalent, in a relevant science subject such as chemistry, biology, biochemistry, pharmacy, zoology or botany. Prospective students with relevant industry experience are also welcome to apply.

# STRATHCLYDE INSTITUTE OF PHARMACY & BIOMEDICAL SCIENCES

## **RESEARCH DEGREES**

PhD, MPhil

Contact for Research Degrees

**t:** +44 (0)141 548 2135

e: sipbs-postgrad@strath.ac.uk

## **TAUGHT COURSES**

- · Advanced Biochemistry
- Advanced Immunology
- Advanced Pharmacology
- Advanced Clinical Pharmacy Practice
- Advanced Drug Delivery
- · Advanced Pharmaceutical Manufacturing
- Biomedical Sciences
- Cancer Therapies
- Clinical Pharmacy
- Industrial Biotechnology
- Molecular Microbiology
- Neuroscience & Mental Health
- Pharmaceutical Analysis

## **Contact for Taught Courses**

e: science-masters@strath.ac.uk

The Strathclyde Institute of Pharmacy and Biomedical Sciences (SIPBS) is a major research centre with a focus on three principal areas – Biomedical Sciences, Pharmaceutical Sciences and Pharmacy. Our research uses modern biological, chemical and informatics technologies to inform on fundamental biological process relevant to health and disease. We integrate biological sciences, medicinal chemistry, pharmaceutical sciences and pharmacy practice to develop new and better medicines which enhance human health and wellbeing. This basic science approach underpins translational research related to clinical practice and industry engagement.

SIPBS is supported by major grant funding from many sources. All our postgraduate programmes are fully embedded in the Institute giving our students excellent access to world-class research and teaching. The education and training in SIPBS provides students with a wide range of skills and knowledge for careers in academia, the pharmaceutical industry, Health Service research and biotechnology enterprises.

The Institute houses and interfaces with the following:

- The Industrial Biotechnology Innovation Centre (IBioIC)
- CMAC EPSRC Centre for Innovative Manufacturing in Continuous Manufacturing and Advanced Crystallisation
- The Cancer Research UK Formulation Unit
- Scottish Government Cancer Medicines Outcomes Programme
- Health Data Research UK @ Strathclyde Programme

## **Research Areas**

Research is focused around our Institute strap-line of 'New Medicines, Better Medicines and Better Use of Medicines' and is undertaken in our four research groups:

## Cellular and Molecular Basis of Disease

We focus on understanding the fundamental processes involved in biological systems including normal health and how this changes in disease. Determining how the body functions under both physiological and pathophysiological conditions further enhances our understanding of disease conditions. This helps us to identify potential novel therapeutic targets that can be probed using available in vitro and in vivo techniques.

We look for new disease targets and, therefore, potential new therapies, using a combination of molecular and cell biology techniques. In collaboration, we use medicinal chemistry, chemical biology, radiobiology and regenerative therapeutic approaches to improve treatment of disease and to develop research tools to increase understanding of disease mechanisms.

Our research incorporates a broad range of activities in cancer, cardiovascular disease, inflammatory disease, neurodegenerative disease, neuroscience, parasitology and rare conditions that can be investigated through multiple target pathways in humans.

## **Microbiology and Industrial Biotechnology**

The group focuses on several research areas in microbiology and Industrial Biotechnology.

## **Drug Discovery**

- Exploring the boundaries of specialised metabolites for targeted drug discovery
- Understanding microbial interactions for informed bioprospecting
- Understanding replication of specialised metaboliteproducing actinobacteria
- · Minor groove binding antibiotics

## **Microbial Biochemistry**

- Bacterial membrane transporter characterisation in Escherichia coli
- Drug resistance in Mycobacterium tuberculosis

## **Microbial Genetics**

- Microbial genetics and signalling by bacterial enhancer binding proteins in actinobacteria
- DNA replication and end patching of bacterial linear chromosomes

## **Microbial Genomics**

- Pseudomonas aeruginosa pathogenicity
- Pseudomonas bacteria for drug discovery
- Corynebacterium and Nocardia phylogeny and epidemiology

## **Industrial Biotechnology**

Working with industry partners from concept to adoption, enabling bio-based growth.

## **Pharmaceutical Sciences**

Through the discovery, development and manufacture of innovative drugs, millions of people's lives are saved and the quality of life for many others are improved.

SIPBS Pharmaceutical Sciences research contributes to the development, manufacture and testing of the next generation of medicines that promote the effective delivery and targeting of drugs. Our research builds on expertise in physical and material science, pharmaceutical technology, and formulation and advanced processing to translate new and existing chemical entities into safe, effective and high quality medicines.

The mission of the Drug Discovery, Formulation and Delivery team is to push traditional boundaries in pharmaceutical sciences. We have a broad spectrum of expertise including, but not limited to advanced drug delivery technologies (e.g. nanomedicines), routes of administration (e.g. oral, ocular, lung, intravenous), therapeutic targets (tumour, immune system), chemistry (novel drugs, surface functionalisation) and natural products (lead compounds).

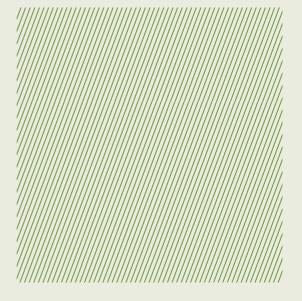
The Materials & Manufacture research team has expertise in crystallisation & particle formation, materials characterisation & formulation design, process monitoring & control, as well as digital manufacturing.

We also research and develop novel materials and devices for medicines delivery. Our researchers have international academic/clinical/industry/patient collaborations.

## Pharmacoepidemiology and Health Care Research

Within this theme, our aim is to maximise the use of Scotland's rich health informatics datasets, including the new individual-level prescribing dataset, to support stratified medicine approaches and investigate the impact of interventions on public health. The programme focuses on medicine adherence, clinical outcomes, and toxicities in real-world clinical practice.

We lead the Farr Institute pharmacoepidemiology programme. This focuses on cardiovascular and immunological therapies and we have complementary programmes in respiratory disease, cancer and infection.



## ADVANCED BIOCHEMISTRY

## MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Strathclyde ranked no 3 for Pharmacology & Pharmacy in the UK in the Complete University Guide 2024

Specialise in a fundamental research area

Develop a range of current and relevant laboratory skills

Benefit from teaching by active researchers and practising clinical professionals

Gain in-depth understanding of the life sciences

## 

## **Compulsory Classes**

- Essential Skills and Employability for Masters Students
- Entrepreneurship
- Postgraduate Studies in Advanced Biochemistry
- · Postgraduate studies in Clinical Biochemistry
- Advanced Topics in Biomedical Research
- · Advanced Techniques in Biomedical Research

## **Optional Classes**

- Advanced Techniques in In Vivo Biology (practical class)
- Drug Discovery
- Postgraduate Studies in Haematology

## 

In addition, students undertake a 10-week research project which is assessed through a written thesis.

## 

12 months full-time, 24 months part-time

## 

Second-class Honours degree, or equivalent, in a biological or chemical discipline.

## ADVANCED IMMUNOLOGY ///

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Strathclyde ranked no 3 for Pharmacology & Pharmacy in the UK in the Complete University Guide 2024

Specialise in a fundamental research area

Develop a range of current and relevant laboratory skills

Benefit from teaching by active researchers and practising clinical professionals

Gain in-depth understanding of the life sciences

## 

## **Compulsory Classes**

- Essential Skills and Employability for Masters Students
- Postgraduate Studies in Clinical Immunology
- Advanced Techniques in Biomedical Research
- Advanced Topics in Biomedical Research
- Postgraduate Studies in Immunology

## **Optional Classes**

- Advanced Techniques in In Vivo Biology (practical class)
- Drug Discovery
- Postgraduate Studies in Haematology

## 

In addition, students undertake a 10-week research project which is assessed through a written thesis.

## 

12 months full-time, 24 months part-time

## ENTRY REQUIREMENTS //////////////////////

Second-class Honours degree, or overseas equivalent, in a biological or chemical discipline.

## ADVANCED /////////PHARMACOLOGY

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Strathclyde ranked no 3 for Pharmacology & Pharmacy in the UK in the Complete University Guide 2024

Develop a range of current and relevant laboratory skills

Underpinned by our strong research base, links with industry, the National Health Service (NHS) and international partners

Study how drugs and other chemicals affect the functions of the body

## 

## **Compulsory Classes**

- Essential Skills and Employability for Masters Students
- Postgraduate Studies in Pharmacology
- Advanced Techniques in Biomedical Research
- Advanced Topics in Biomedical Research
- Postgraduate Studies in Clinical Pharmacology

## **Optional Classes**

- Advanced Techniques in In Vivo Biology (practical class)
- Drug Discovery

## 

In addition, students undertake a 10-week research project which is assessed through a written thesis.

## 

12 months full-time, 24 months part-time

## 

Second-class Honours degree, or overseas equivalent, in a biological or chemical discipline.

# ADVANCED CLINICAL PHARMACY PRACTICE (WITH INDEPENDENT PRESCRIBING CERTIFICATE)

MSc/PgDip/PgCert

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Strathclyde ranked no 3 for Pharmacology & Pharmacy in the UK in the Complete University Guide 2024

Choose classes that address specific practice and personal development needs

The Independent Prescribing qualification is included as an optional element in the course

Study in a small peer-group learning environment

## 

Classes include the following:

- Clinical Decision Making: The process of managing a complex patient; How to review evidence and use in decision making; Communication / consultation skills and information gathering
- Research Fundamentals 1: Introduction to research in pharmacy practice; Planning research in pharmacy practice; Introduction to the quantitative research methods; Introduction to critical appraisal
- Research Fundamentals 2: How to identify a research gap; How to formulate a research question; Introduction to qualitative study designs; Data collection, data transcription, qualitative data analysis and the use of software

The Independent Prescribing (IP) qualification is included in the course as an optional class; practitioners who have already completed the IP qualification will receive 30 credits for prior learning and the requirements for each award will be reduced correspondingly.

## 

A maximum of five years is allowed from the point of first registration to complete the award of an MSc.

## ENTRY REQUIREMENTS //////////////////////

A degree in Pharmacy from a UK university or an equivalent qualification, and registration with the General Pharmaceutical Council.

## ADVANCED DRUG DELIVERY

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Strathclyde ranked no 3 for Pharmacology & Pharmacy in the UK in the Complete University Guide 2024

Develop understanding of the biology of specific targets for drug-based intervention

Learn about and apply the principles of design and formulation of drug dosage systems

Gain specialist research skills and practical experience

## 

## **Compulsory Classes**

- Essential Skills and Employability for Masters Students
- Pharmaceutical Formulation and Clinical Pharmaceutics
- Chemical & Spectroscopic Methods
- Pharmaceutical Project Management
- Novel Therapeutics and Biopharmaceuticals
- Advanced Topics in Drug Delivery

## 

In addition, students undertake a 10-week research project which is assessed through a written thesis.

### 

12 months full-time, 24 months part-time

## 

Second-class Honours degree, or equivalent, in a biological or chemical discipline.

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Strathclyde ranked no 3 for Pharmacology & Pharmacy in the UK in the Complete University Guide 2024

You will be equipped to take up jobs in the food, chemical and pharmaceutical industries

Learn about key aspects of manufacturing approaches for pharmaceuticals and high-value chemicals including pharmaceutical development and production, continuous manufacturing processes, crystallisation mechanisms, manufacturing processes as they relate to the modern pharmaceutical industry, transferable and professional skills

## 

## **Compulsory Classes**

- Process Analytical Technology and Quality by Design in Manufacturing
- Essential Skills and Employability for Masters Students
- · Principles of Pharmaceutics
- Drug Substance Manufacture: Industrial Crystallisation
- Drug Product Manufacture
- Pharmaceutical Project Management and Digital Design

## 

In addition, students undertake a 10-week research project, either at the University or at an external company or organisation, and which is assessed through a written thesis.

## 

12 months full-time; 24 months part-time

## 

Second-class Honours degree, or overseas equivalent, in science or engineering.

## BIOMEDICAL SCIENCES

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Opportunity to select a clinically-oriented or basic life science research pathway

Develop skills in statistics, communication, ethics, science writing and experimental data analysis

Gain specialist research skills and practical experience

## 

## **Compulsory Classes**

- Essential Skills and Employability for Masters Students
- Entrepreneurship
- Advanced Techniques in Biomedical Research
- Advanced Topics in Biomedical Research

## **Optional Classes**

- Advanced Techniques in In Vivo Biology (practical class)
- Drug Discovery (practical class)
- · Postgraduate Studies in Pathology
- Postgraduate Studies in Haematology
- Postgraduate Studies in Clinical Biochemistry/ Clinical Immunology/Clinical Microbiology

## 

In addition, students undertake a 10-week research project which is assessed through a written thesis.

## 

12 months full-time; 24 months part-time

## 

Second-class Honours degree, or overseas equivalent, in a biological or chemical discipline.

## 

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Focus on anti-cancer treatment therapies, with a particular emphasis on personalised medicine

Gain the skills to contribute to the global drive to advance cancer treatment

Learn about cancer drug discovery development

## 

## **Compulsory Classes**

- Essential Skills and Employability for Masters Students
- Entrepreneurship, Innovation & Commercialisation
- Advanced Techniques in Biomedical Research
- · Development and Design of Anti-Cancer Drugs
- Targeted Cancer Therapies for Personalised Medicine
- Radiobiology and Radiation Oncology: from beam to bedside
- Drug Discovery and Development in Cancer
- Scientific Writing

## 

In addition, students undertake a 10-week research project which is assessed through a written thesis.

## 

12 months full-time; 24 months part-time

## 

Second-class Honours degree, or overseas equivalent in science or a health-related subject.

## CLINICAL PHARMACY ///////// MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Strathclyde ranked no 3 for Pharmacology & Pharmacy in the UK in the Complete University Guide 2024

Teaching is mostly by GPhC-registered pharmacists

Students are exposed to a variety of clinical practice areas including community/primary care

Benefit from advanced training to become a safer and more effective practitioner of pharmaceutical care

## 

## **Compulsory Classes**

- Interpretation of laboratory/routine clinical information in the management of common clinical conditions
- Counselling & communication, therapeutic drug monitoring
- Evidence Based Medicine & Application of research methods
- Pharmacy service delivery, team leadership and professionalism
- Psycho-social aspects to Pharmacy Practice
- Application of Pharmaceutical Care in complex patients

## 

12 months full-time

## 

Second-class Honours degree, or overseas equivalent, in Pharmacy; plus a minimum of 18 months post-study clinical experience in a patient facing role or environment.

A copy of your CV should be provided as proof, detailing work experience and duties.

## INDUSTRIAL //////////BIOTECHNOLOGY

## MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

The course is designed to respond to industry needs and is at the forefront of developments in biotechnology

Benefit from the expertise of staff from academic institutions across Scotland and industry partners

## 

## **Compulsory Classes**

- Bioprocessing (Strathclyde)
- Applied Biocatalysis (Strathclyde)
- Synthetic Biology (Glasgow)
- Big Data Fundamentals (Strathclyde)
- Introduction to Bioinformatics for Life Scientists (Edinburgh)
- Downstream Processing (Heriot Watt)

### **Optional Classes**

- Blue Biotechnology (SAMS)
- Renewable Energy Technologies (Abertay)
- Project Management (Strathclyde)
- Circular Economy and Transformations Towards Sustainability (Strathclyde)
- Understanding the Regulatory Environment of Bioprocessing Industries (GCU)
- Food Commodities and Sustainability (GCU)
- Food Microbiology and Biotechnology (GCU)

## 

In addition, students undertake a 10-week placement, typically hosted at one of our industry partners, working on an industrially-relevant project on which they write and present a formal report.

## 

12 months full-time

## ENTRY REQUIREMENTS ///////////////////////

Upper second-class Honours degree, or overseas equivalent, in biology, biotechnology, chemistry, chemical engineering or a related subject.

Other qualifications and industrial experience may be considered.

## MOLECULAR /////MICROBIOLOGY

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop knowledge and skills in areas such as genomics, molecular genetics and synthetic biology

Gain transferable skills in statistics, communication, ethics, science writing and critical analysis of data

Design experiments and analyse complex datasets

## 

## **Compulsory Classes**

- Essential Skills and Employability for Masters Students
- Entrepreneurship
- Postgraduate Studies in Microbiology
- Advanced Microbiology
- Advanced Topics in Biomedical Research
- Advanced Techniques in Biomedical Research

## **Optional Classes**

- Advanced Techniques in In Vivo Biology (practical class)
- Drug Discovery
- Postgraduate Studies in Clinical Microbiology

## 

In addition, students undertake a 10-week research project which is assessed through a written thesis.

## 

12 months full-time; 24 months part-time

## 

Second-class Honours degree, or equivalent, in a biological or chemical discipline.

## 

MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Strathclyde ranked no 3 for Pharmacology & Pharmacy in the UK in the Complete University Guide 2024

Gain skills in the analytical techniques used to detect, identify and quantify drugs and related substances

Examine strategies for analytical research and development

Gain experience in instrumentation and techniques

## 

## **Compulsory Classes**

- Chemical Analysis: Principles Applications and Methods
- Spectroscopy: Principles, Application and Methods
- Principles, Application and Method Development in Chromatography
- · Bioanalysis, Biotechnology and Quality Management
- Bioanalytical and Chromatographic Methods
- Essential Skills and Employability for Masters Students

## 

In addition, students undertake a 10-week research project which is assessed through a written thesis.

## 

12 months full-time

## 

Second-class Honours degree, or overseas equivalent, in an appropriate science.

## 

## MSc

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain an in-depth understanding of how the nervous system works from molecules to cells to functional networks to high-order cognition

Appreciate the range of diseases and disorders that affect the nervous system, how we can research them and develop new treatments

Develop skills and awareness of in vitro and in vivo models, experimental design, bio-statistics, communication, ethics, science writing and data analysis

## 

## **Compulsory Classes**

- Core Neuroscience
- Functions of the Nervous System
- Disorders of the Nervous System
- Essential Skills and Employability for Masters Students
- Entrepreneurship
- Advanced Techniques in In Vivo Biology (practical class)
- Advanced Topics in Biomedical Research
- Advanced Techniques in Biomedical Research (practical class)

## 

In addition, students undertake a 10-week research project which is assessed through a written thesis.

## 

12 months full-time; 24 months part-time

## 

Second-class Honours degree, or overseas equivalent, in a biological or science-related discipline.

## STRATHCLYDE BUSINESS SCHOOL

Founded in 1948, Strathclyde Business School is an enterprising and pioneering organisation within a leading international technological university.

Strathclyde Business School has held triple accreditation from the three main business school accreditation bodies – AMBA, EQUIS and AACSB – since 2004. We were the first business school in Scotland to achieve triple accreditation.

We have a reputation for research excellence. We develop theory-led, policy-relevant research through collaboration with industry, government, business and the third sector. Our industry-facing research centres of excellence, which work with industry partners, include the Fraser of Allander Institute, the Scottish Centre for Employment Research, the Strathclyde Institute for Operations Management and the Centre for Financial Regulation and Innovation. We were recognised in the Research Excellence Framework (REF) 2021 for our world-leading research - with a GPA of 3.26.

Our departments and programmes hold internationally recognised industry accreditations. Our departments are accredited by expert professional bodies such as CIMA, ICAS and CIPD.

Strathclyde is the first business school in Scotland to be awarded the Small Business Charter Award. This award recognises our world-leading support for scaling Scotlish firms through innovation, internationalism and leadership.

Strathclyde Business School is a signatory of the UN's Principles for Responsible Management Education. This commits us to supporting the transformation of management education, research and thought leadership by developing learning communities and promoting awareness of the UN's Sustainable Development Goals.

## Contact

SBS Marketing and Student Recruitment Unit t: +444 (0)141 553 6116/6105/6117 e: sbs.admissions@strath.ac.uk











## RESEARCH **DEGREFS**

## **RESEARCH DEGREES**

MRes, MPhil, PhD, DBA

Research degrees (MRes, MPhil and PhD) are offered in all of our academic departments, so departmental sections outline key research themes.

## 

A PhD is both a training ground for future researchers and a process intended to produce a coherent and well-reasoned contribution to knowledge in a particular discipline or field of inquiry. As such, you should expect it will take you to the limits of your current knowledge and beyond, into uncertain, and potentially challenging new territory.

Your PhD study includes some taught elements. At Strathclyde Business School we offer a Postgraduate Certificate in Research Methodology for Business and Management, which includes a minimum of 60 credits of research training.

In addition, you are encouraged to access various other training and development opportunities such as those offered by the Strathclyde Researcher Development Programme. Each department in the School also offers its own programme of researcher development, including support for attendance at relevant conferences.

PhD candidates work independently, but with guidance from supervisors who have expertise in knowledge domains relevant to your programme of study. Two or more supervisors are appointed by the University and are responsible for establishing regular contact and keeping you informed about requirements for progress and completion of the PhD degree. At least one supervisor will be an academic member of staff in the Business School. Supervisors normally operate as a team, providing guidance about the nature of research and the standards expected.

PhDs are examined by a 'viva voce', a face-to-face examination where an external examiner, appointed by the University, alongside an internal examiner from Strathclyde will question you on the research undertaken.

The minimum period of study for full-time PhD candidates is normally 36 months (P/T 72 months), during which you are expected to be working on your research for at least 35 hours per week except for reasonable periods of holiday, which should be agreed in advance with supervisors.

## Master of Philosophy (MPhil)

The Master of Philosophy (MPhil) degree is a Masters degree by research. Like the PhD you will have two supervisors nominated by the University and will undertake some research methods training. The minimum study period for MPhil is 12 months.

## **Doctor of Business Administration (DBA)**

The Doctor of Business Administration (DBA) is a research degree designed to develop business professionals skilled in solving business problems. Your focus will be on applying academic theories, methods and models to solve problems of practice. Research projects undertaken during the DBA programme aim to understand and explore how organisations work and how management is practised.

- Learn how to analyse complex situations and problems
- Acquire skills in conceptual and reflexive thinking
- Develop knowledge of the design, implementation and monitoring of research interventions

## **Research Methodology in Business &** Management (MRes)

The MRes provides research training that corresponds with guidelines set by the Economic and Social Research Council (ESRC) and the Engineering and Physical Sciences Research Council (EPSRC). It can be taken as a standalone qualification or as a foundation course for a PhD. MPhil and PhD students must complete the PgCert element of the course as part of their mandatory research methods training.

## **Entry requirements**

## MRes, MPhil

Minimum upper second-class honours degree, or overseas equivalent, in a relevant business or social science related subject.

## PhD

In addition to a first degree, we also normally expect a Masters degree. Applicants with lower grades may also be considered if they can demonstrate strong scores in elements of independent research.

You should also provide evidence of your resourcefulness, commitment and resilience as demonstrated by broader professional and life experiences via a CV and personal statement. This evidence should be centred on your ability to undertake and complete a PhD and contribute to a positive PhD community.

Minimum upper second-class honours degree, or overseas equivalent, or Masters degree in a relevant discipline from a recognised academic institution. In addition you are expected to have a minimum of five years management experience.

## Contact for Research Degrees

e: sbs-pgradmissions@strath.ac.uk

## 

MRes (full-time, part-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Research training following ESRC and EPSRC guidelines

Comprehensive coverage of a wide range of methodological issues that arise in business research

Suitable as a foundation course for a PhD or a standalone qualification

Strong practical focus including training in software and advanced quantitative and qualitative methods

## 

## **Compulsory Classes**

- · Research Methods
- · Reviewing Literature for Business
- · Research Philosophy
- Research Colloquium
- Research Project

## **Optional Classes**

- Software for Research
- Introduction to Quantitative Methods
- Advanced Quantitative Methods
- Policy & Project Evaluation
- Causality in Empirical Finance Research
- Advanced Qualitative Methods
- · Writing up Postgraduate Research

## 

Masters students submit a dissertation of around 20,000 words.

## 

MRes: 12 months full-time; 24 months part-time

## 

Masters degree or minimum upper second-class honours degree or overseas equivalent in business and management or other relevant subject area.

# DEPARTMENT OF ACCOUNTING & FINANCE

## **RESEARCH DEGREES**

MRes, MPhil, PhD

## **Contact for Research Degrees**

e: sbs-pgradmissions@strath.ac.uk

## **TAUGHT COURSES**

- Finance
- International Accounting & Finance
- International Banking & Finance
- Investment & Finance
- · Finance & Management
- Financial Technology (FinTech)
- Economics & Finance (see Department of Economics, p. 179)
- Sustainable Finance
- Actuarial Science (see Department of Mathematics & Statistics, p. 147)
- Quantitative Finance (see Department of Mathematics & Statistics, p. 149)

## **Contact for Taught Courses**

SBS Marketing and Student Recruitment Unit

- **t:** +44 (0)141 553 6116/6105/6117
- e: sbs.admissions@strath.ac.uk

MSc Finance and MSc Investment & Finance have been accepted into the Chartered Financial Analyst (CFA) Institute University Recognition Program. This status is granted to institutions whose degree programme(s) incorporate at least 70% of the CFA Program Candidate Body of Knowledge (CBOK), and which provide students with a solid grounding in the CBOK and positions them well to sit for the CFA exams.

We have partnered with the Certificate in Quantitative Finance (CQF), the largest professional qualification in quant finance, recognised by financial companies worldwide.

## **Research Areas**

We cover all areas of accounting and finance, with particular expertise in corporate finance, treasury management, derivative markets, bond markets, portfolio performance, volatility in financial markets, international banking, critical accounting, management accounting, social, environmental and public sector accounting, issues relating to privatisation and regulation of utilities, development finance and small business finance and accounting.

Our research activities are supported by subscription to an extensive set of comprehensive databases, internal workshops, seminar series and financial support for conference participation.

## Accounting

Research topics include:

- economic, political and social impact of accounting on our everyday lives
- · financial reporting standard for smaller entities
- assessment of environmental risk in the financial sector

## **Finance**

Research topics include:

- investment strategies
- corporate finance
- risk management
- · corporate governance
- financial econometrics

## **Facilities for Research Students**

You have access to the Datastream (global economic, financial and accounting data) which includes IBES earnings forecasts, SDC Platinum, Thomson One, Compustat, Execucomp, CRSP (Centre for Research in Securities Pricing), London Business School Share Price Database data and Bloomberg.

## ENTRY REQUIREMENTS FOR RESEARCH DEGREES

PhD in Accounting: Honours degree and Masters degree in accounting (or equivalent). Qualified and part-qualified accountants with first degree in social sciences or humanities are also encouraged to apply.

PhD in Finance: Masters degree or equivalent, particularly in finance, economics, accounting or mathematics.

January 2024 start date available. Visit www.strath.ac.uk for full details.

## 

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Accredited by the Chartered Institute of Management Accountants (CIMA)

Develop understanding of financial theory and analysis

Learn about financial markets and institutions

Part of the Chartered Financial Analyst (CFA) Institute University Recognition Program

Academic Partner Institution with
The Global Association of Risk Professional (GARP)

Attain the Bloomberg Market Concepts certificate

## 

## **Compulsory Classes**

- Principles of Finance
- Accounting and Financial Analysis
- Quantitative Methods for Finance
- International Financial Markets and Banking
- Advanced Corporate Finance and Applications
- Derivatives and Treasury Management

## **Optional Classes (choose two)**

- Portfolio Theory and Management
- · Empirical Methods in Finance
- Behavioural Finance\*
- Management Accounting
- Financial Modelling for Excel\*
- Fixed Income Analysis
- Equity Analysis

## TWO RESEARCH PROJECTS //////////

Supported by an academic supervisor, you will work on two research projects. Topics can be chosen from the broad range of issues covered on the programme. You will be assessed on your ability to select and apply relevant theory and research methods.

## **DURATION OF PROGRAMME !/////////**

MSc: 12 months full-time

## 

Minimum second-class honours degree or overseas equivalent, in accounting, economics, business studies or a subject area with a strong quantitative component.

The programme requires no prior knowledge of finance.

January 2024 start date available. Visit www.strath.ac.uk for full details.

## INTERNATIONAL ACCOUNTING & FINANCE

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Accredited by the Chartered Institute of Management Accountants (CIMA)

Gain awareness of international accounting standards

Study financial management and securities markets

Learn to apply analytical techniques in practice

Academic Partner Institution with
The Global Association of Risk Professional (GARP)

Attain the Bloomberg Market Concepts certificate

## 

## **Compulsory Classes**

- Principles of Finance
- Accounting and Financial Analysis
- · Quantitative Methods for Finance
- International Financial Markets and Banking
- Advanced Corporate Finance and Applications
- Advanced Accounting
- Management Accounting

## **Optional Classes (choose one)**

- Portfolio Theory and Management
- Empirical Methods in Finance
- International Accounting\*
- Financial Modelling for Excel\*
- Fixed Income Analysis
- Equity Analysis

## 

Supported by an academic supervisor, you will work on two research projects. Topics can be chosen from the broad range of issues covered on the programme. You will be assessed on your ability to select and apply relevant theory and research methods.

## 

MSc: 12 months full-time

## 

Minimum second-class honours degree or overseas equivalent, in accounting, economics, business studies, maths, statistics or computing.

<sup>\*</sup>September entry only

<sup>\*</sup>September entry only

## 

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Accredited by the Chartered Institute of Management Accountants (CIMA)

Understand financial theory and analysis

Learn about international banking and financial markets

Use accounting information in financial decision-making

Academic Partner Institution with The Global Association of Risk Professional (GARP)

Attain the Bloomberg Market Concepts certificate

## 

## **Compulsory Classes**

- Principles of Finance
- · Accounting and Financial Analysis
- Quantitative Methods for Finance
- International Financial Markets and Banking
- Topics in Corporate Finance
- Financial Management for Banks
- · Derivatives and Treasury Management
- · Risk Management for Banks

## **Optional Classes (choose one)**

- Portfolio Theory and Management
- · Empirical Methods in Finance
- · Management Accounting
- Behavioural Finance
- Financial Modelling for Excel
- Fixed Income Analysis
- Equity Analysis

## TWO RESEARCH PROJECTS //////////

Supported by an academic supervisor, you will work on two research projects. Topics can be chosen from the broad range of issues covered on the programme. You will be assessed on your ability to select and apply relevant theory and research methods.

## 

MSc: 12 months full-time

## 

Minimum second-class honours degree or overseas equivalent, in accounting, economics, business studies or a subject area with a strong quantitative component.

The programme requires no prior knowledge of finance or banking.

January 2024 start date available. Visit www.strath.ac.uk for full details.

## **INVESTMENT & FINANCE**

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Accredited by the Chartered Institute of Management Accountants (CIMA)

Learn the latest techniques and tools used by investment professionals

Attain the Bloomberg Market Concepts certificate

Enhanced learning with a series of case studies and simulations

Part of the Chartered Financial Analyst (CFA) Institute University Recognition Program

Academic Partner Institution with The Global Association of Risk Professional (GARP)

## 

## **Compulsory Classes**

- Principles of Finance
- · Accounting and Financial Analysis
- · Quantitative Methods for Finance
- International Financial Markets and Banking
- Topics in Corporate Finance
- Derivatives and Treasury Management
- Portfolio Theory and Management
- Equity Analysis

## **Optional Classes (choose one)**

- Empirical Methods in Finance
- Behavioural Finance\*
- Financial Modelling for Excel\*
- Fixed Income Analysis

## 

Supported by an academic supervisor, you will work on two research projects. Topics can be chosen from the broad range of issues covered on the programme. You will be assessed on your ability to select and apply relevant theory and research methods.

## 

MSc: 12 months full-time

## 

Minimum second-class honours degree or overseas equivalent, in accounting, economics, business studies or a subject area with a strong quantitative component. Applications are also considered from those with appropriate professional qualifications and relevant practical experience.

<sup>\*</sup>September entry only

## FINANCE & MANAGEMENT // FINANCIAL TECHNOLOGY

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain knowledge of financial and management principles

Understand how organisations work

Develop technical and analytical skills

Opportunity to study at Toulouse Business School

Undertake a project in each subject area

Attain the Bloomberg Market Concepts certificate

## 

The programme is offered jointly by the Department of Accounting & Finance and the MBA Unit.

## **Compulsory Classes**

- Business Strategy
- Principles of Finance
- · Accounting and Financial Analysis
- · International Financial Markets and Banking
- Professional Management Practice

## Optional Classes (choose at least one from each list)

### Finance

- Behavioural Finance
- Topics in Corporate Finance
- Derivatives
- Fixed Income Analysis
- Equity Analysis

### Management

- Service Operations Management
- Managing in Europe (Toulouse)
- Commercial Management in Projects
- New Venture Creation
- The Inclusive Organisation
- · The Game Changer
- Developing Effective Consulting Skills

## 

You will be required to undertake two research projects, one in Finance and one in Management.

## 

MSc: 12 months full-time

## 

Minimum second-class honours degree or overseas equivalent, in economics, accounting, business studies, maths, statistics, computing, related subjects, or an equivalent professional qualification.

## 

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Combine the study of theory with intensive practice and industrial engagement

Understand the various technologies and innovations driving FinTech growth

Opportunity to focus on a FinTech topic of your choosing as a finance project

Attain the Bloomberg Market Concepts certificate

## 

The programme is offered jointly by the Departments of Accounting & Finance and Management Science.

## **Compulsory Classes**

- Principles of Finance
- Programming for Financial Technology
- Quantitative Business Analysis
- Big Data Fundmentals
- Sustainable Finance and Technology
- · Business Information Systems
- Risk Management for Banks
- Becoming an Effective Technology Analyst
- FinTech Innovations, Applications and Considerations

## Optional Classes (choose one from each list)

## Accounting & Finance

- Fixed Income Analysis
- · Portfolio Theory and Management
- Derivatives

## Management Science

- Stochastic Modelling for Analytics
- Business Simulation Modelling
- Risk Analysis and Management

## Computer Science

- Evolutionary Computation for Finance 1
- Big Data Tools and Techniques
- Fundamentals of Machine Learning for Data Analytics

## 

You will undertake two research projects, one in Finance and one in Management Science.

## 

MSc: 12 months full-time

## 

Minimum second-class honours degree or overseas equivalent, in accounting, economics, business studies, or a subject area with a strong quantitative component. No prior knowledge of finance required.

## SUSTAINABLE FINANCE /////

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Acquire a robust foundation in the principles and application of Environmental, Social & Governance (ESG) frameworks in finance and investing

Gain skills in problem solving and understanding the nuances of ESG with multiple case studies and guest lectures from industry leaders

Enhance your skills and knowledge regarding the role of technology, big data, and innovation for sustainable finance

Attain the Bloomberg Market Concepts certificate

Academic Partner Institution with The Global Association of Risk Professional (GARP)

## 

## **Compulsory Classes**

- · Quantitative Methods for Finance
- · Principles of Finance
- International Financial Markets & Banking
- Sustainable Finance
- Sustainable Finance & Technology
- Sustainable Accounting: Theory & Practice
- Applications of Sustainable Finance

## **Optional Classes (choose three)**

- Behavioural Finance
- Risk Management for Banks
- Management Accounting
- Empirical Methods in Finance
- Portfolio Theory % Management
- Derivatives
- Fixed Income Analysis
- Equity Analysis

## 

You'll work on two research projects focusing on sustainable finance, supported by an academic supervisor. You can choose a topic from the broad range of issues covered on the programme. You'll be assessed on your ability to select and apply relevant theory and research methods. This work may be linked to an issue raised by, or a problem to be solved for, an employer.

## **DURATION OF PROGRAMME //////////**

12 months full-time

## 

Minimum second-class Honours degree or overseas in accounting, economics, business studies or a subject area with a strong quantitative component.

The programme requires no prior knowledge of finance.

# DEPARTMENT OF ECONOMICS

## **RESEARCH DEGREES**

MRes, MPhil, PhD

## **Contact for Research Degrees**

e: sbs-pgradmissions@strath.ac.uk

### **TAUGHT COURSES**

- Applied Economics
- Applied Economics (online)
- Economics & Finance (in collaboration with the Department of Accounting & Finance)
- Economics & Policy of Energy & Climate Change

### Contact for Taught Courses

SBS Marketing and Student Recruitment Unit

**t:** +44 (0)141 553 6116/6105/6117

e: sbs.admissions@strath.ac.uk

The Department, home to the Fraser of Allander Institute (FAI) and Strathclyde's Applied Economics Centre for Doctoral Training (CDT), is one of the leading UK centres for internationally recognised policy and business-relevant economics research. We have a diverse mix of staff, with collaborators throughout the UK and overseas, involved in both fundamental and applied academic research and commissioned projects for businesses and policymakers.

The Department is an active participant in the Scottish Graduate Programme in Economics and the Scottish Graduate School of Social Science. We are members of the Scottish Institute for Research in Economics, and are a founding partner in the Economic Statistics Centre of Excellence for the UK Office for National Statistics (ONS). Our research activity in recent years has been supported by a diverse range of prestigious funders, including the ESRC, the EPSRC, the Scottish Government, the ONS, the UK Energy Research Centre, and the Scottish Funding Council.

The FAI, for more than 40 years, has been Scotland's authority on economic policy and the Scottish economy. Our postgraduate students have a variety of opportunities to engage with the FAI, including in taught classes, MSc summer projects, and work placements in the Institute.

Through our Applied Economics CDT, we seek appropriately qualified PhD applicants whose proposed research is closely aligned with our focus on applied policy-relevant economics. Our research students are supported to not only achieve excellence in rigorous research but also to reach beyond the confines of academia through collaboration and engagement with stakeholders.

## Research Areas Applied Microeconomics

Our research analyses the market behaviours of consumers and businesses. Research areas include a range of applications in industrial organisation, international trade theory and policy, public economics, health economics, labour economics, and strategic behaviour in markets.

## **Applied Econometrics**

We apply statistical and mathematical theories to economics to test ideas and forecast regional, national and global trends. Research includes big data methods in macroeconomics, multiple imputation methods for cross-country panel data, and a range of applications of time series and spatial econometrics.

## **Applied Macroeconomics**

We examine how economies perform and evolve at national level, with a particular focus on real-world challenges facing policymakers and business. We are engaged in macroeconomic modelling of the UK and Scottish economies, nowcasting the economy, developing new ways of measuring of the modern economy, labour market analysis and macroeconomic policy evaluation.

## **Energy and the Environment**

We explore the relationships between economic activity and the environment, recognising their interrelationships. We are engaged in work on economic-environmental accounting and modelling, the economic contribution of energy activities and policies, and the consequences of environmental change.

## ENTRY REQUIREMENTS FOR RESEARCH DEGREES

PhD and MPhil – a strong first degree in economics, or a degree in which economics was a major part, and a Masters degree in economics that includes core classes in Microeconomics, Macroeconomics, Econometrics, a range of other relevant classes and a dissertation or a research project.

## APPLIED ECONOMICS

## MSc/PgDip/PgCert/Modular

(full-time, part-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain skills in data analysis and economic modelling

Learn to apply economic techniques to real-world problems in business and policy

Develop ability to interpret and understand economic statistics and communicate these to technical and non-technical audiences

## 

## **Compulsory Classes**

- · Fundamentals of Microeconomics
- Fundamentals of Macroeconomics
- Professional Development for Economists
- Analysis of Economic Data
- Economic Appraisal and Modelling
- Topics in Public Economics
- International Macroeconomics

## **Optional Classes (choose four)**

- International Development
- Games of Strategy
- Environmental Economics
- Energy Economics
- Economics of Inequality and Inclusive Growth
- Regional Policy Development
- · Health Economic Policy
- · Climate Change Economics

## 

Your summer project topic can be chosen from any of the areas/issues covered on the programme. This is your opportunity to develop a substantive piece of applied work on a topic that is of particular interest to you, with supervision provided by an appropriate member of staff. It's also a key opportunity to put into practice what you have learned during your MSc studies.

## **DURATION OF PROGRAMME**

MSc: 12 months full-time: 24 months part-time

## 

Minimum second-class honours degree or overseas equivalent in any subject.

## APPLIED ECONOMICS (ONLINE)

MSc (part-time online distance learning)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain skills in data analysis and economic modelling

Learn to apply economic techniques to real-world problems in business and policy

Develop ability to interpret and understand economic statistics and communicate these to technical and non-technical audiences

Benefit from a flexible online distance learning study model where you fit your learning around work and other commitments

## 

## **Compulsory Classes**

- Fundamentals of Microeconomics
- Fundamentals of Macroeconomics
- International Macroeconomics
- Topics in Public Economics
- Analysis of Economic Data
- Economic Appraisal and Modelling
- Professional Development for Economists

## **Optional Classes (choose four)**

- · Energy Economics
- International Development
- Environmental Economics
- Games of Strategy
- · Economics of Inequality and Inclusive Growth
- Health Economic Policy

## 

Your summer project topic can be chosen from any of the areas/issues covered on the programme. This is your opportunity to develop a substantive piece of applied work on a topic that is of particular interest to you, with supervision provided by an appropriate member of staff. It's also a key opportunity to put into practice what you have learned during your MSc studies.

## **DURATION OF PROGRAMME**

MSc: 24 months part-time

## 

Minimum second-class honours degree or overseas equivalent in any subject.

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Enhance your knowledge and skills in a range of economic, finance, analysis and quantitative methods

Learn to analyse, understand and explain complex economic and financial issues

Develop specialised skills through choice of options

## 

The programme is jointly delivered by the Department of Economics and the Department of Accounting & Finance.

## **Compulsory Classes**

- Fundamentals of Macroeconomics
- **Fundamentals of Microeconomics**
- Analysis of Economic Data
- International Macroeconomics
- Professional Development for Economists
- Principles of Finance
- Accounting and Financial Analysis

### Plus either

 Advanced Corporate Finance and Applications OR Derivatives and Treasury Management

· Topics in Corporate Finance, and Derivatives

## **Optional Classes**

You will be able to choose one class offered across the Departments of Economics and Accounting & Finance.

## 

The MSc is completed by producing a piece of research in the summer term. You will have the choice to undertake a substantive piece of applied work on a topic that is of particular interest to you, with supervision provided by an appropriate member of staff in Economics, or to undertake shorter empirical projects in Finance during the summer months. These choices let you apply the skills and learning you have developed during the course of your taught classes.

## **DURATION OF PROGRAMME !/////////**

12 months full-time

## 

Minimum second-class honours degree or overseas equivalent, in economics, finance, business studies and management science. Applications are also welcome from candidates with strong career experience in a relevant field.

## ECONOMICS & FINANCE ///// ECONOMICS & POLICY OF /// **ENERGY & CLIMATE CHANGE**

MSc (full-time, part-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Accredited by the Energy Institute

Develop a strong understanding of key issues in environment and energy from policy and economic perspectives

Gain practical insight from leading energy and climate change experts

Benefit from applied teaching, which focuses on the development of transferable skills and applicable knowledge

Career opportunities across the huge scope of applications that energy and climate change have in business.

## 

## **Compulsory Classes**

- **Economic Appraisal and Modelling**
- **Economic Data Analysis**
- **Energy Economics**
- Natural Resources, Sustainability and Governance
- **Energy Finance and Forecasting**
- Energy Technologies, Impacts and Implementation
- **Environmental Economics**
- Climate Change Economics
- **Energy Industries and Markets**
- Global Energy Policy and Politics

## **Optional Classes (choose two)**

- Games of Strategy
- **Fundamentals of Microeconomics**
- Fundamentals of Macroeconomics
- Topics in Public Economics
- International Macroeconomics
- International Development
- Health Economic Policy
- Economics of Inequality and Inclusive Growth
- Regional Development Policy
- any optional class at the appropriate level as approved by the Programme Director

## 

The summer project will be an extensive and substantial piece of economic and/or policy analysis, and aims to develop those applied research skills that are so important to the energy and climate change professional.

## 

MSc: 12 months full-time; 24 months part-time

## 

Minimum second-class honours degree or overseas equivalent in any subject. Applications are welcome from candidates with significant high-calibre industry or government experience.

# HUNTER CENTRE FOR ENTREPRENEURSHIP

## **RESEARCH DEGREES**

PhD

## **Contact for Research Degrees**

e: sbs-pgradmissions@strath.ac.uk

.

## **TAUGHT COURSES**

- Entrepreneurship, Innovation & Technology
- · Project Management & Innovation
- Social Innovation & Entrepreneurship

## **Contact for Taught Courses**

SBS Marketing and Student Recruitment Unit **t:** +44 (0)141 553 6116/6105/6117

e: sbs.admissions@strath.ac.uk

The Hunter Centre for Entrepreneurship is a research-oriented academic department with a focus on developing a better understanding of how entrepreneurs and their organisations can more successfully create new value for business and society. Research is conducted by nationally and internationally.

Research is conducted by nationally and internationallyrecognised experts in high-growth, international, corporate, technology, family, rural, social and female entrepreneurship.

We are at the heart of the Global Entrepreneurship Monitor (GEM) research programme, an annual assessment of levels of entrepreneurial activity in dozens of economies. The Centre has played a significant role in the international organisation of GEM since 2000 and is responsible for the Country Report for Scotland and, jointly with Aston Business School, the UK Report.

Researchers participate in a range of projects which are funded by the EU (business start-up, technology commercialisation, and growth rates), as well as funding councils in Norway (enterprise diversity, farm-based innovation, and family business succession) and in New Zealand (social entrepreneurship).

The Centre's international research impact is also evidenced through invited reviews for, and editorial contributions to, internationally-ranked entrepreneurship research journals, including the Journal of Business Venturing, Entrepreneurship Theory and Practice, Small Business Economics, and the International Small Business Journal.

Academic staff and PhD students regularly present their work at international conferences such as the Babson Kauffman Entrepreneurship Research Conference, the ECSB Research in Entrepreneurship and Small Business conference, the European Academy of Management conference and the US Academy of Management conference.

The international character of the Centre is also reflected in the heritage of many of our academic staff (Germany, Greece, Italy, Kenya, France, Turkey, Kazakhstan and India) and of our PhD students (Oman, Egypt, Nigeria, Singapore, Canada, China, Switzerland, Pakistan, USA, Turkey, Greece, Poland, India, Croatia, Columbia, South Africa, Germany, Russia and Thailand).

Our academic staff and PhD students regularly engage in university research exchanges in the USA, Germany, France and New Zealand and also enjoy visiting posts (Norway, France, Finland, New Zealand).

## **Research Themes**

Entrepreneurship

- Entrepreneurial ecosystems
- Entrepreneurship & enterprise policy
- Enterprise finance
- Social & environmental entrepreneurship
- Entrepreneurship in developing countries
- Inclusive entrepreneurship
- · High growth entrepreneurship

## Innovation

- Innovation systems & socio-technical transitions
- Innovation policy evaluation & design
- Technology hype & legitimacy

## Strategy

- · Strategic planning & foresight
- Organisational performance, resilience & capabilities
- Open & collaborative strategy

# ENTREPRENEURSHIP, INNOVATION & TECHNOLOGY

MSc (full-time, part-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Combine theoretical knowledge with practical skills

Study a practical, career-focused programme

Undertake a virtual incubation project to develop an innovative business opportunity

#### 

#### **Compulsory Classes**

- Creativity and Venture Planning
- Mindset Lab
- Social Entrepreneurship
- Internationalisation and Growth
- Leading and Managing Startups
- Entrepreneurial Finance
- Issues and Trends in Entrepreneurship, Innovation and Technology
- Data Lab
- Strategic Innovation Management
- Disruptive Technologies

#### VIRTUAL INCUBATOR PROJECT ////////

You will work on a real-world innovation challenge. Using an innovative virtual platform, participants will collaborate with the UK ecosystem and go through a stage-gate model of developing and pitching their solution to potential investors.

#### 

MSc: 12 months full-time; 24 months part-time

#### 

Minimum second-class honours degree or overseas equivalent, in any subject.

## 

MSc (full-time, part-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop the skills to manage transformation through complex technology and innovation projects

Prepare for a career in industries ranging from manufacturing and services to the public sector, or start your own business

Opportunity to work on a live issue for a business client

#### 

#### **Compulsory Classes**

- Project and Programme Management
- Technology and Organisational Change
- · Business Operations
- Business Strategy
- · Strategic Innovation Management
- Issues and Trends in Entrepreneurship, Innovation and Technology
- Project Portfolio Management
- Global Innovation
- Consulting in Practice
- Project Management Body of Knowledge
- Commercial Management in Projects

#### 

The project provides you with the opportunity to apply your learning to a more practical situation. Under academic supervision, you'll spend time working individually, or in a group, on a topic of personal interest. While many projects are subject specific and focused on theory, increasingly, projects are undertaken with organisations, which allow you to learn more about a specific industry or work with a particular company.

#### **DURATION OF PROGRAMME //////////**

MSc: 12 months full-time: 24 months part-time

#### 

Minimum second-class honours degree or overseas equivalent, in any subject.

## SOCIAL INNOVATION & //////ENTREPRENEURSHIP

MSc (full-time, part-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Embedded in a department which is passionate about supporting students who are dedicated to social and environmental change

Learn about socially innovative ideas, including restorative justice, hospices, and distance learning, and how they are brought to fruition through an entrepreneurial process

Classes and labs explore why social innovation and entrepreneurship are so central to society

Study mega-trends, such as climate change and the threat of pandemics, that require novel solutions, and business models to implement them

#### 

#### **Compulsory Classes**

- · Creativity and Venture Planning
- Mindset Lab
- Social Entrepreneurship
- Social Impact Strategy Lab
- · Entrepreneurial Management and Leadership
- Entrepreneurial Finance
- Issues and Trends in Entrepreneurship, Innovation and Technology
- Data Lab
- Strategic Innovation Management
- Global Innovation Lab

#### 

This project replaces the traditional, academic dissertation with a final 'capstone' module that marries your academic knowledge with the ability to put this into practice to create a positive difference in a local social enterprise and/or provide strategic support for a new social innovation. Whilst still as rigorous as a dissertation, the summer project will provide a chance for you to undertake fieldwork within the sector and communicate their findings to wider groups of stakeholders.

#### **DURATION OF PROGRAMME ////////////**

MSc: 12 months full-time: 24 months part-time

#### 

Minimum second-class honours degree or overseas equivalent, in any subject.

content of the programme was very interesting, very well liaised, and engaging with regards to my purpose to strengthen my career. Secondly, the University bid and projection for innovation and technology certainly stands out above the rest, making Strathclyde the best choice.

#### **David Gomez**

MSc Entrepreneurship, Innovation & Technology student

# DEPARTMENT OF MANAGEMENT SCIENCE

#### **RESEARCH DEGREES**

MRes, MPhil, PhD

e: sbs-pgradmissions@strath.ac.uk

#### **TAUGHT COURSES**

- · Business Analysis & Consulting
- Business Analysis & Consulting (online)
- Data Analytics
- Health Analysis, Policy & Management
- International Master in Project Management
- Operational Research (online)
- Supply Chain & Logistics Management/Procurement Management/Sustainability Management (offered jointly with the Department of Design, Manufacture & Engineering Management)

#### **Contact for Taught Courses**

SBS Marketing and Student Recruitment Unit

- **t:** +44 (0)141 553 6116/6105/6117
- e: sbs.admissions@strath.ac.uk

The Department of Management Science is one of the leading Operational Research (OR) departments in the UK. Research interests of staff span the spectrum of management science activity. Many are internationally-known – through their academic output and applied work with government and business organisations. Through applied research and consultancy, staff collaborate with major organisations on new ways of dealing with complex decisions.

We engage in a range of methodological approaches to research including both qualitative and quantitative methods. Our interests are in providing holistic decision support and developing approaches to problem structuring, model development, data analysis, model inference and decision support.

We develop our methods to meet the needs of users with a variety of applications. In the UK, we work with 15 universities and collaborate internationally with academics from 45 universities. Currently, we are working on funded research projects with academics from each of the other departments within Strathclyde Business School, as well as the Faculty of Engineering and Faculty of Science.

#### Research Areas Health Systems

The health systems research cluster is interested in the applications of management science in healthcare organisation and delivery. Our work has close links with health economics, optimisation and analytics, operations management and demography. On-going projects include health technology assessment and programme evaluation, healthcare performance targets and variations in practice, process improvement for hospital services, pharmacy automation, process improvement for hospital services, and radiation treatment planning.

#### **Optimisation and Analytics**

The optimisation and analytics group is interested in developing theory, solution methods and algorithms for challenging optimisation and predictive analytics problems stemming from various real-world applications. We are actively working on projects with many sectors, including transportation and logistics, health, manufacturing, energy and local/national governments.

#### **Risk and Uncertainty**

Our interest in risk relates to decision-making under uncertainty. We are engaged in all aspects of the decision support process from problem structuring through data analysis and model building to recommendations. We work closely with industry, applying methods primarily from statistics, probability and decision analysis, to real-world problems.

#### **Knowledge**

Our research group covers a wide range of knowledge modelling. We explore the fundamentals of knowledge, problems, creativity, intuition, levels of expertise, risk, perception of risk, and subjective probabilities. We do most of our work in applied contexts, structuring problems and modelling expert knowledge in order to support decision-makers and decision-takers in their organisations. Our research has also served as the basis for developing a number of software packages used for knowledge modelling.

## Operations Management and Supply Chain Management

Our interest in operations and supply chain management covers a wide range of topics, including operations strategy, service operations management, innovation in operation, project management, performance measurement, enterprise resource planning, logistics optimisation and supply chain risk modelling.

January 2024 start date available.
Visit www.strath.ac.uk for full details.

## BUSINESS ANALYSIS & CONSULTING

MSc/PgDip (full-time, part-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain practical, evaluative and analytical skills

Learn how to use business models to develop strategy for organisations

Build your skills through working on cases for client organisations in our Becoming an Effective Business Analyst class

#### 

#### **Compulsory Classes**

- Foundations of Operational Research and Business Analysis
- Quantitative Business Analysis
- · Managing Business Operations
- · Spreadsheet Modelling and Demand Forecasting
- Strategy Modelling and Management
- Becoming an Effective Business Analyst
- Business Analysis & Consulting Project

#### **Optional Classes (choose three)**

- Business Simulation Methods
- Risk Analysis and Management
- Business Information Systems
- Performance Measurement and Management
- Business Analytics

#### **DURATION OF PROGRAMME '//////////**

MSc: 12 months full-time; 24 months part-time PgDip: 9 months full-time; 21 months part-time

#### 

MSc: Minimum second-class honours degree or overseas equivalent, in business, economics, engineering or the social sciences. Applications from those with other degrees are welcome.

PgDip: Minimum of a Pass degree, or equivalent, in an appropriate subject. Subject to performance students may transfer from the Diploma course to the MSc course.

\*Note: the current degree structure is under review. Please visit our website for the most up-to-date information.

## BUSINESS ANALYSIS & /////CONSULTING (ONLINE)

#### MSc/PgDip/PgCert

(part-time online distance learning)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain practical, evaluative and analytical skills

Learn how to use business models to develop strategy for organisations

Benefit from a flexible online distance learning study model to suit your work schedule

#### 

The programme contains three stages. Successful progression will lead towards completion of the MSc. To proceed to the Postgraduate Diploma you need to be in appropriate employment.

- PgCert (stage 1)
- PgDip (stage 2)
- MSc project (stage 3)

#### **Compulsory Classes**

#### **PgCert**

- Foundations of Operational Research and Business Analysis
- Quantitative Business Analysis
- Managing Business Operations
- · Spreadsheet Modelling and Demand Forecasting
- Strategy Modelling and Management

#### PgDip

Becoming an Effective Business Analyst

#### Optional Classes (one for PgCert; two for PgDip)

- Business Simulation Methods
- Risk Analysis and Management
- Business Information Systems
- Performance Measurement and Management

#### 

To complete the course, you'll be expected to undertake a project. The project will be integrated with your employment. You'll have individual personal mentoring to guide you in reflection and learning.

#### **DURATION OF PROGRAMME '/////////**

PgCert (stage 1): minimum 12 months part-time PgDip (stage 2): minimum 12 months part-time MSc (stage 3): maximum 6 months part-time

#### 

PgCert: Minimum Pass degree or non-UK equivalent, in business, economics, engineering or social sciences. We also encourage applications from other degrees. Admittance is to the PgCert (stage 1) only.

**MSc** (full-time, part-time)

### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain a comprehensive skill set and expertise through input from three contributing departments

Use data analytics techniques within business contexts to become rounded problem-solvers

Build your skills through working on cases for client organisations in our Data Analytics in Practice class

#### 

#### **Compulsory Classes**

- Big Data Fundamentals
- Big Data Tools and Techniques
- Data Analytics in R
- Business and Decision Modelling
- Optimisation for Analytics
- Data Analytics in Practice
- Data Analytics Project

### Optional Classes (choose from at least two departments)

Computer & Information Sciences

- Advanced Machine Learning for Data Analytics
- Database Fundamentals
- Evolutionary Computation for Finance 1 & 2
- Fundamentals of Machine Learning for Data Analytics

#### Mathematics & Statistics

- Financial Econometrics
- Bayesian Spatial Statistics
- Mathematical Introduction to Networks

#### Management Science

- Stochastic Modelling for Analytics
- Business Simulation Modelling
- Risk Analysis and Management
- Business Information Systems

#### **DURATION OF PROGRAMME**

MSc: 12 months full-time; 24 months part-time

#### 

MSc: Minimum second-class honours degree, or overseas equivalent, in mathematics, natural sciences, engineering, or economics/finance. Degrees in other areas are welcome. Applications from those with other degrees are also encouraged if you have demonstrated a good grasp of numerical/quantitative subjects.

\*Note: the current degree structure is under review. Please visit our website for the most up-to-date information.

## HEALTH ANALYSIS, POLICY & MANAGEMENT

**MSc** (full-time, part-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain a multidisciplinary and comprehensive skillset for analysing the design and implementation of healthcare policy and service delivery

Develop practical, evaluative and analytical skills to influence strategy and performance in the healthcare sector

Begin or progress a career that helps organisations improve quality and efficiency of care

Our academics are actively engaged in research and consulting work for UK and global health organisations

Build your skills through working on cases for client organisations in our Becoming an Effective Health Analyst class

#### 

#### **Compulsory Classes**

- Becoming an Effective Health Analyst
- Managing Healthcare Operations
- · Health Economics and Evaluation
- Foundations of Operations Research and Business Analysis
- · Quantitative Business Analysis
- Spreadsheet Modelling and Demand Forecasting
- Health Systems Performance, Financing and Innovation
- Health Analysis, Policy & Management Project

#### Optional Classes (choose three)

- Business Simulation Methods
- Stochastic Modelling for Analytics
- Performance Measurement and Management
- · Risk Analysis and Management
- · Strategy Modelling and Management
- Medical Statistics
- Effective Statistical Consulting
- Survey Design and Analysis
- Health Economic Policy
- Gender, Health and Modern Medicine
- History, Health and Heritage
- Governing Highs and Health: History and the Control of Drugs, c.1800-c.1945

#### 

MSc: 12 months full-time; 24 months part-time

#### 

Minimum second-class Honours degree, or overseas equivalent in management sciences, economics, business, public health, health sciences, mathematics, statistics, and computing science. Applications from those with other degrees or related experience are also encouraged.

## INTERNATIONAL MASTER //// IN PROJECT MANAGEMENT

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain understanding of project management as a process to deliver change

Examine recent approaches in project management with a cross-sectoral and intercultural perspective

Benefit from the academic expertise of two institutions

#### 

The programme is delivered in English in collaboration with POLIMI Graduate School of Management (Milan, Italy).

#### Semester 1

## (September to January – POLIMI Graduate School of Management)

- · Strategy and Organisation Management
- Project Management Fundamentals
- Innovation Management
- Project Accounting
- Project Finance
- Project Risk Management

#### Semester 2

#### (February to June - Strathclyde Business School)

- · Project Portfolio Management
- · Leadership for Change and Innovation
- Issues and Trends in Entrepreneurship, Innovation and Technology
- Commercial Management
- · Strategic Procurement Management
- · Consulting in Practice
- Elective choice (20 credits) from the Postgraduate Spring School

During the semester at Strathclyde, you also have the opportunity to attend one elective (non-mandatory) offered on campus or in one of the School's international centres.

#### 

Final project work or research project can be based in the UK, Italy or overseas, depending on available opportunities.

#### **DURATION OF PROGRAMME ////////////**

MSc: 18 months full-time

#### 

Bachelor degree (or an equivalent academic degree) of at least three years duration and 180 ECTS credits in any discipline. Candidates should have a minimum of second-class Honours degree or equivalent CGPA.

## OPERATIONAL RESEARCH (ONLINE)

#### MSc/PgDip/PgCert

(part-time online distance learning)

### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop a rigorous understanding of advanced analytical methods

Learn how to play an effective role in providing model-based support to managers for better decisions

Benefit from a flexible online distance learning study model to suit your work schedule

#### 

The programme contains three stages. Successful progression will lead towards completion of the MSc. To proceed to the Postgraduate Diploma you need to be in appropriate employment.

- PgCert (stage 1)
- PgDip (stage 2)
- MSc project (stage 3)

#### **Compulsory Classes**

#### **PgCert**

- Foundations of Operational Research and Business Analysis
- Quantitative Business Analysis
- Managing Business Operations
- Spreadsheet Modelling and Demand Forecasting
- Operational Research Methods

#### PgDip

Becoming an Effective OR Modeller

#### Optional Classes (one for PgCert; two for PgDip)

- Business Simulation Methods
- Risk Analysis and Management
- Business Information Systems
- Advanced OR Modelling with Specialised Software Tools

#### 

To complete the course, you'll be expected to undertake a project. The project will be integrated with your employment

#### **DURATION OF PROGRAMME '/////////**

PgCert (stage 1): minimum 12 months part-time PgDip (stage 2): minimum 12 months part-time MSc (stage 3): maximum 6 months part-time

#### 

PgCert: Minimum Pass degree or non-UK equivalent, in business, economics, engineering or social sciences. We also encourage applications from other degrees. Admittance is to the PgCert (stage 1) only.

## SUPPLY CHAIN & LOGISTICS MANAGEMENT/ PROCUREMENT/ MANAGEMENT/ SUSTAINABILITY MANAGEMENT/

MSc (full-time, part-time)

### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain an in-depth understanding of the strategic and operational issues relating to supply chain management

Contribute towards making organisations competitive

Accredited by the Chartered Institute for Procurement and Supply

#### 

The programme is delivered in collaboration with the Department of Management Science.

#### **Compulsory Classes**

- Strategic Supply Chain Management
- Supply Chain Operations
- Enterprise Resource Planning
- Advanced Project Management
- Case Studies in Supply Chain Management
- People, Organisation and Technology
- Performance Measurement and Management
- Individual Project

#### **Specialist Classes by Theme**

- Logistics Management Management of Total Quality and Continuous Improvement, Lean and Green Logistics, Spreadsheet Modelling and Demand Forecasting
- Procurement Management Strategic Procurement Management, Spreadsheet Modelling and Demand Forecasting, Organisation Buying Behaviour and Structures
- Sustainability Management Sustainable Product Design and Manufacturing, Lean and Green Logistics, Remanufacturing

#### **DURATION OF PROGRAMME**

12 months full-time; 24 months part-time

#### 

Normally a first-class or second-class honours degree (or international equivalent) in a relevant engineering, technology, science, business or similar discipline.

## **DEPARTMENT OF MARKETING**

#### **RESEARCH DEGREES**

MRes, MPhil, PhD

#### **Contact for Research Degrees**

e: sbs-pgradmissions@strath.ac.uk

#### **TAUGHT COURSES**

- · Digital Marketing Management
- Marketing
- · Innovation & Marketing Management
- International Marketing
- · Tourism Marketing Management

#### **Contact for Taught Courses**

SBS Marketing and Student Recruitment Unit

**t:** +44 (0)141 553 6116/6105/6117

e: sbs.admissions@strath.ac.uk

The Department of Marketing at Strathclyde is one of the oldest Marketing departments in Europe. It has an international reputation for the quality of its teaching and research. Staff act as advisers and consultants to private and public organisations and also hold senior posts in the Chartered Institute of Marketing, the Market Research Society and other professional associations, as well as national and International companies.

#### **Research Areas**

Our academic staff are actively involved in research and have built a strong portfolio of publications in leading journals. Research expertise in the Department includes:

- · Consumer culture and consumer research
- · Brand management
- Sustainability and ethics
- Digital and social media marketing
- Tourism research
- Service research
- · International marketing
- · Strategic marketing
- · Data analytics
- · Supply chain management and innovation
- · Business to business & relationship marketing

#### **Marketing Management**

Marketing Management research has attracted funding from several organisations, and the group's areas of interest include strategic marketing, franchising, strategic alliances, sustainable supply chains, corporate social responsibility and green consumers, digital marketing, branding, marketing management within the b2b services and tourism contexts and sales management.

#### **Consumer Culture Research**

Our research looks at how market-mediated culture impacts consumers, institutions and society at large. Falling under the umbrella of Interpretive Consumer Research, we employ a range of conventional and innovative qualitative research methods. Some of our research adopts a transformative perspective, for example, projects on consumer vulnerability have investigated how various conditions and contexts, such as poverty or ill health, transform market interactions. We are also interested in consumer communities, celebrity culture, the sustainable marketing sites of cultural heritage, and cultural approaches towards the understanding of brand culture.

#### **Researching Business Networking**

This programme of research is developing knowledge and management practice regarding business networking and relationship management across a range of industry sectors.

#### **Digital Marketing**

A number of staff and doctoral students are working on a series of projects relating to the use of Web 2.0, social networks and new media in the area of marketing. This touches on a number of the other specialist areas of research within the Department such as services marketing, marketing communications and consumer behaviour.

#### **Services Marketing**

This research stream focuses on the linkages between corporate culture, performance measurement and service delivery personnel, corporate reputation, service branding, service differentiation and customer satisfaction. Also issues around the service profit chain concept, including customer (value) management, research on satisfaction and loyalty, complaining behaviour, retail marketing and relationship marketing.

#### **Hospitality and Tourism Management**

Key areas covered include managerial relevance, human resource issues, tourism marketing and consumer behaviour and critical perspectives. Some projects have contributed to developing Scottish hospitality and tourism, for example, work to foster social inclusion through hospitality to counter marginalisation; and to tourism and transport policy-making through studies of leisure travel behaviour. The team has also been active in developing new methodologies and conceptualisations, for example, development of sociological impressionism.

January 2024 start date available. Visit www.strath.ac.uk for full details.

## 

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain an understanding of digital technologies and their application for business purposes

Learn about digital marketing in practice with hands-on experience of established and emerging digital media

Benefit from the involvement of industry partners

#### 

#### **Compulsory Classes**

- Cross-Cultural Buyer Behaviour
- Strategic Digital Marketing
- Marketing Research in a Digital Age
- · eMarketing in Practice
- Supply Chain Digitalisation
- Contemporary Consumers
- Integrated Marketing Communications
- · Leadership for Change and Innovation
- Key Skills
- Business Information Systems

#### **DIGITAL TRANSFORMATIVE PROJECT**

The Digital Transformative Project provides you with an opportunity to transform a website for a given client.

#### **DURATION OF PROGRAMME ///////////**

MSc: 12 months full-time

#### 

Minimum second-class honours degree or overseas equivalent, in marketing or business. Business-related degrees should include a significant marketing component.

January 2024 start date available.
Visit www.strath.ac.uk for full details.

### 

MSc (full-time)

### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Suitable for non-business graduates who want to pursue a career in this area

Develop an understanding of marketing in relation to individuals and organisations

Undertake an industry marketing project

#### 

- Consumer Behaviour
- Strategic Marketing Management
- International Marketing Research
- Brand Management and Strategy
- Key Skills
- Dissertation Skills

#### **Optional Classes (choose four)**

- Contemporary Consumers
- Customer-Led e-Marketing
- Destination Marketing Management
- Export Marketing
- Integrated Marketing Communications
- International Culture and Heritage Marketing
- International Services Marketing
- Managing Tourism Resources
- Retail Marketing Management
- Sports Marketing in a Global Context
- Social Responsibility & Sustainability

## MARKETING WORKS: APPLIED ////////// MARKETING GROUP PROJECT

You work in small groups to tackle a real-life problem for a local or national company.

#### 

The research project allows you to pursue an area of specific interest, providing scope for original thought, research and presentation.

#### 

MSc: 12 months full-time

#### 

Minimum second-class honours degree or overseas equivalent, in a non-marketing discipline. A business degree may be considered, if it does not contain significant marketing components.

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Study modules in both marketing and engineering as part of this integrated course

Understand how technology and innovation open the way to new business opportunities

Opportunity to work on a group project within industry

#### 

The programme is offered jointly with the Department of Design, Manufacture & Engineering Management.

#### **Compulsory Classes**

- Brand Management and Strategy
- Strategic Marketing Management
- Strategic Technology Management
- Design Management
- Financial Engineering
- Strategic Procurement Management
- International Marketing Research
- Supply Chain Operations
- Marketing Works Group Project
- Management of Innovation

#### Optional Classes (choose two from each department)

#### Marketing

- Export Marketing
- International Services Marketing
- B2B and Key Account Management

Design, Manufacture & Engineering Management

- Management of Total Quality and Continuous Improvement
- Design Methods
- Project Management

## MARKETING WORKS: APPLIED ////////// MARKETING GROUP PROJECT

You work in small groups to tackle a real-life problem for a local or national company.

## DISSERTATION: INDIVIDUAL RESEARCH PROJECT

The research project allows you to pursue an area of specific interest, providing scope for original thought, research and presentation.

#### **DURATION OF PROGRAMME //////////**

MSc: 12 months full-time

#### 

Minimum second-class honours degree or overseas equivalent, in business, economics, engineering or science.

## 

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Specialist course reflecting current diversity in global marketing practice

Acquire new skills and enhance your existing experience

Benefit from industry collaboration

Study within a student cohort from across the globe

#### 

#### **Compulsory Classes**

- · Cross-cultural Buyer Behaviour
- Strategic Global Marketing
- International Marketing Research
- Brand Management and Strategy
- Key Skills
- Dissertation Skills

#### **Optional Classes (choose three)**

- Contemporary Consumers
- Customer-Led e-Marketing
- Destination Marketing Management
- Export Marketing
- Integrated Marketing Communications
- International Culture and Heritage Marketing
- International Services Marketing
- Managing Tourism Resources
- Retail Marketing Management
- Social Responsibility & Sustainability
- Sports Marketing in a Global Context

## MARKETING WORKS: APPLIED '///////// MARKETING GROUP PROJECT

You work in small groups to tackle a real-life problem for a local or national company.

## DISSERTATION: INDIVIDUAL '//////////////////////RESEARCH PROJECT

The research project allows you to pursue an area of specific interest, providing scope for original thought, research and presentation.

#### **DURATION OF PROGRAMME '//////////**

MSc: 12 months full-time

#### 

Minimum second-class honours degree or overseas equivalent, in marketing or a business-related degree including a significant marketing element.

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain insight into the technologically-innovative nature of contemporary marketing in the context of tourism

Benefit from skills-based teaching

Enhance your leadership, teamwork and cross-cultural skills

#### 

#### **Compulsory Classes**

- · Consumer Behaviour
- Strategic Marketing Management
- International Marketing Research
- Brand Management and Strategy
- Destination Marketing Management
- Managing Tourism Resources
- International Services Marketing
- Key Skills
- Dissertation Skills

#### **Optional Classes (choose one)**

- Contemporary Consumers
- · Customer-Led e-Marketing
- Export Marketing
- Integrated Marketing Communications
- International Culture and Heritage Marketing
- Retail Marketing Management
- Social Responsibility & Sustainability
- Sports Marketing in a Global Context

## MARKETING WORKS: APPLIED ////////// MARKETING GROUP PROJECT

You work in small groups to tackle a real-life problem for a local or national company.

#### 

The research project allows you to pursue an area of specific interest, providing scope for original thought, research and presentation.

#### **DURATION OF PROGRAMME ///////////**

MSc: 12 months full-time

#### 

Minimum second-class honours degree or overseas equivalent in any subject.

can be summarised as simply superlative. The lecturers are highly competent and their domain knowledge is so deep that it appears bottomless. This course is so forward-looking that I feel that it will remain relevant for a long time to come.

#### Avantika Sudhakar

MSc Innovation & Marketing Management student

# MBA AND GENERAL MANAGEMENT

#### **TAUGHT COURSES**

- · Master of Business Administration (MBA)
- · Business & Management
- International Management
- Strategic FinTech (Bahrain)

With over 50 years' experience in developing a ground-breaking MBA programme, Strathclyde Business School is a major innovator in the field of business and management.

The Strathclyde MBA is a generalist degree, intended to develop experienced business people and professionals into business leaders. To be an effective leader, you need a solid overview of business, and that is something that SBS has been offering since it introduced the MBA in 1966.

The Strathclyde MBA is highly experiential and based on collaborative learning. Students share their varied work experiences, knowledge, understanding and skills.

The Strathclyde MBA is a very flexible programme. We offer a variety of study routes, allowing you to choose a programme which suits both your work and/or personal circumstances:

- MBA full-time 12 months intensive study in Glasgow
- Executive MBA (Glasgow) intensive seminars in Glasgow over two years
- Executive MBA (International) intensive seminars at one of our international centres over two years (Bahrain, Greece, Malaysia, Oman, UAE)

Our selection process is designed to identify talented professionals from a wide range of academic, business and cultural backgrounds who might gain from, and contribute to, our learning community.

As a result, while there are formal requirements for entry, our concern is with the potential of individual candidates, their interpersonal and team working qualities, and the range and nature of their managerial experience.

The general management Masters programmes on offer, namely MSc Business & Management and MSc International Management, develop the keys skills required for a successful career in management. Learning from leading academic experts, you will gain a multicultural and international perspective, and build experience of business by working with industry contacts.

The MSc Strategic FinTech (Bahrain) is an executive Master programme for managers seeking to build their knowledge, skills and confidence in leading and managing financial technologies as a strategic resource/interest. It is the only specialist FinTech Masters programme pitched at the executive level, and delivered in partnership with the Bahrain Institute of Banking and Finance.

#### **Contact for Taught Courses**

SBS Marketing and Student Recruitment Unit

**t:** +44 (0)141 553 6116/6105/6117

e: sbs.admissions@strath.ac.uk

January 2024 start date available.
Visit www.strath.ac.uk for full details.

## MASTER OF BUSINESS /////ADMINISTRATION

MSc (full-time, part-time/executive)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain an internationally-recognised qualification

Learn in a cross-cultural environment

Study strategy with internationally-acclaimed academics

Develop confidence as a manager and leader

Improve your career prospects or change career direction

#### STUDY THEMES AND CLASSES

#### **Building Capabilities**

- Operations & Project Management
- Accounting & Financial Management
- Business Intelligence & Data Analytics
- Marketing & Brand Management
- Economic Analysis for Strategists

#### **Responsible Leadership**

- Strategic Leadership Development
- · Leading a Sustainable Organisation
- Grand Challenges of Corporate Governance

#### **Strategy in Practice**

- Digital Transformation & Technological Innovation
- · Applied Strategic Management
- Entrepreneurial Thinking & Practice

#### **MBA Capstone Project**

#### **Three pathways:**

- Research Dissertation
- Consulting Project
- Entrepreneurial Project

#### **Elective classes - subject to change**

- · Service Operations Management
- Commercial Management in Projects
- Strategic Thinking for Global Challenges & Opportunities
- Project Management
- Managing Digital Technologies
- The Inclusive Organisation
- The Game Changer
- Sustainability: Perspectives & Practices
- New Venture Creation
- Developing Effective Consulting Skills
- Managing in Europe (at Toulouse Business School, France)

#### 

The MBA project provides an opportunity to complete either a capstone project, traditional thesis or business venture at the end of the programme to examine in depth a managerial, organisational or environmental issue of your choice over an extended period of time. It can be done on an individual basis or as part of a group. The project enables you to put into practice the knowledge and skills you have developed throughout the programme. We have close links with industry and can offer a number of company-sponsored projects, many of which can lead to internships.

#### 

Career and professional development support is a key part of the MBA, focusing on the skills needed to achieve long-term strategic career enhancement. As well as core job search activities such as CV and LinkedIn profile building and how to excel in interviews, we provide workshops and seminars on a range of personal and management skills, on-campus and online. Every student has access to one-to-one sessions with our Careers and Employability Consultants, as well as our online Career Management site, which offers a wealth of resources available 24/7.

#### **Flexible Study Options**

- full-time (12 months intensive study in Glasgow)
- part-time/executive (intensive seminars over two years in Glasgow or at our five international centres)

#### 

A good first degree is expected and applicants must be at least 24 years old, have a minimum of three years'postgraduate managerial/professional experience and be able to demonstrate career progression.

Applicants who hold non-degree/professional qualifications, are expected to have at least five years' varied management/professional experience with demonstrable career progression.

Candidates with no formal qualifications require extensive and varied managerial/professional experience of 10 years or more, with sustained career progression.

Candidates will be interviewed.

#### Contact

- **t:** +44 (0)141 553 6119/6118
- e: sbs.admissions@strath.ac.uk

January 2024 start date available.
Visit www.strath.ac.uk for full details.

## BUSINESS & /////////MANAGEMENT

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

The programme is accredited by the Association of MBAs as a Pre-Experience Masters in Management

Experience a broad, yet specific exploration of general management

Develop skills in management theories and practices

#### 

#### **Compulsory Classes**

- · Professional Management Practice
- Analytical Support for Decision-making
- Managing People in Organisations
- · Leadership for Change and Innovation
- Managerial Accounting
- Marketing Management
- Business Operations
- Finance and Financial Management
- Business Strategy
- Managing Innovation
- Consulting in Practice
- Project Methodology

#### Optional Classes (choose two - subject to change)

- Service Operations Management
- Managing in Europe (Toulouse)
- Commercial Management in Projects
- New Venture Creation
- The Inclusive Organisation
- The Game Changer
- Developing Effective Consulting Skills

#### 

The project provides the opportunity to apply your learning to a practical situation with an organisation.

#### **DURATION OF PROGRAMME ////////////**

MSc: 12 months full-time

#### 

Minimum second-class honours degree or overseas equivalent, in a non-business or management-related subject.

January 2024 start date available.
Visit www.strath.ac.uk for full details.

## 

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop the knowledge and skills required by international managers and leaders to operate in a global environment

Benefit from a practical focus on managing and leading in various organisational settings

#### 

#### **Compulsory Classes**

- Professional Management Practice
- Managing Across Cultures
- Managing People in Organisations
- Marketing Management
- Global Business Environment
- · Finance and Financial Management
- Project Methodology
- Business Strategy
- International Entrepreneurship
- Consulting in Practice

#### Optional Classes (choose two - subject to change)

- Service Operations Management
- Managing in Europe (Toulouse)
- Commercial Management in Projects
- New Venture Creation
- The Inclusive Organisation
- The Game Changer
- Developing Effective Consulting Skills

#### 

The project provides the opportunity to apply your learning to a practical situation with an organisation.

#### **DURATION OF PROGRAMME**

MSc: 12 months full-time

#### 

Minimum second-class honours degree or overseas equivalent, in business or management, or a non-business degree, plus work experience in international trade or business.

## STRATEGIC FINTECH /////(BAHRAIN)

MSc (part-time)

### WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Executive Masters programme for managers seeking to build their knowledge, skills and confidence in leading and managing financial technologies as a strategic resource/interest

Flexible and modern format, which will integrate the latest theory, practice and implementation approaches

Delivered in partnership with the Bahrain Institute of Banking and Finance, in a new state-of-the-art building in FinTech Bay

Approved by the Bahrain Higher Education Council (HEC)

#### 

#### Classes

- Exploring the Future of FinTech
- Leading Digital Transformation in a Finance Context
- · Mastering Evolving Digital Technologies
- Global Developments in FinTech
- Transforming Customer Experience through Financial Technologies
- Fintech Strategy & Business Model Innovation
- Capstone FinTech Experience

In term 4, opt for a customised conclusion to your studies. Choose between management research thesis, consultancy/implementation project (intrapreneurship), and business start-up (entrepreneurship).

#### 

MSc: 24 months part-time

#### 

Minimum second-class honours degree, or overseas equivalent, in accounting, economics, business studies or a subject area with a strong quantitative bias. No prior knowledge of finance required.

# DEPARTMENT OF WORK, EMPLOYMENT & ORGANISATION

#### **RESEARCH DEGREES**

MRes, MPhil, PhD

#### **Contact for Research Degrees**

e: sbs-pgradmissions@strath.ac.uk

#### **TAUGHT COURSES**

- Human Resource Management (full-time/part-time)
- International Human Resource Management
- Work & Organisational Psychology

#### **Contact for Taught Courses**

SBS Marketing and Student Recruitment Unit

**t:** +44 (0)141 553 6116/6105/6117

e: sbs.admissions@strath.ac.uk

The Department of Work, Employment & Organisation has a broad focus on human resource management, organisational studies/behaviour and employment relations. We undertake research in a range of international and UK public, private and voluntary sector organisations. The Scottish Centre for Employment Research, one of the UK's leading contributors on employee-led workplace innovation, sits within the department. The Department also is a Chartered Institute of Personnel and Development (CIPD) Approved Centre and provides programmes leading to professional membership of the CIPD.

### Research Areas

#### Organising for digital and social innovation

Complex social and technological issues require us to rethink traditional concepts of organisation in order to accommodate more collaborative ways of working, and allow us to engage with evermore diverse and precarious contexts of work in the public, private, and third sectors.

#### Current research themes include:

- The creative dynamics of organising, leadership, and identity-work
- Co-production of leadership and organisation in various settings e.g., public sector, entrepreneurial
- How new digital technologies fundamentally shape work content, organisation, and employment relations
- Technology, sustainability, green jobs, and greenwashing

#### Labour markets, skills and employability

Drawing on critical labour market studies, work sociology and work psychology, our research develops theory and informs evidence-based practice and policy in the areas of skills, employability, education and human resource development. Current projects include:

- · Skill ecosystems and occupational change
- Skill utilisation, conversion and mismatch
- Demand for soft skills (e.g. emotions, aesthetics) in the service sector
- · Workplace learning & training
- Employability and underemployment
- Young people and transitions to work
- Gender, careers and occupational segregation; monitoring of equal opportunities
- Low skills work in future cities

## Regulation & restructuring of employment relations in global context

Core research areas include HRM strategy/practice and employment relations, contributing to themes such as participation and voice. A growing area is work and labour within an international political economy (through the Centre for the Political Economy of Labour and the Work, Labour and Globalisation research group). Current projects include:

- Critical perspectives on precarious work in tourism
- · New managerial regimes in social care
- Global value and commodity chains, including business process offshoring
- Migration, poverty and community rights in the Global South
- Emotional labour, aesthetics and performance, service work
- · Workplace dignity, respect and wellbeing

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Combine theory and practice in the study of organisations and the management of work

Suitable for those preparing for a career in HR

Gain professional membership of the Chartered Institute of Personnel and Development

Opportunity to undertake a work-based project

#### 

#### **Compulsory Classes**

- Business Skills
- HRM in a Business Context
- · Contemporary Employee Relations
- Leading, Managing and Developing People
- People Resourcing
- · Critical Issues in HRM
- Employee Reward
- Research Methods

#### **Optional Classes (choose one)**

- · Labour and Diversity in a Global Context
- · Managing HR in Multinationals
- Leadership in Organisations
- Psychometrics in Organisations
- SBS Spring School

## INTEGRATED DISSERTATION AND //////RESEARCH REPORT

The Integrated Dissertation and Research Report provides an opportunity to analyse a live human resources issue in an organisation. This enables you to put into practice the knowledge and skills you have developed throughout the programme.

The Department has a network of HR professionals and assistance can be given by the Department to gain access to an organisation. If access to an organisation is unavailable, you will use a case study approach.

#### 

12 months full-time

#### 

Minimum second-class honours degree or overseas equivalent, in social science or a business-related subject.

## 

MSc/PgDip (part-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Develop an advanced level of knowledge related to HR

Suitable for HR professionals or line managers with people management within their role

Gain professional membership of the Chartered Institute of Personnel and Development

#### 

#### **Compulsory Classes (Year 1)**

- Business Skills
- · HRM in a Business Context
- Leading, Managing and Developing People
- People Resourcing

#### **Optional Classes (Year 2)**

- Business Skills
- Critical Issues in HRM
- Employee Reward
- Contemporary Employee Relations

In addition, one optional class is chosen (see left for list).

#### MANAGEMENT RESEARCH REPORT

PgDip: you complete a 7,000-word Management Research Report, on an HR issue within your place of work.

## INTEGRATED DISSERTATION AND '/////RESEARCH REPORT

MSc: you complete an Integrated Dissertation and Research Report, also based on a live human resources issue and usually based within your place of work.

#### 

Following the Postgraduate Diploma, you may continue to the MSc, participating in a series of research methods workshops and completion of a 15,000-word dissertation.

#### **DURATION OF PROGRAMME ///////////**

PgDip: 24 months part-time; MSc: 24 months part-time MSc (post-diploma): additional 12 months part-time

#### 

MSc/PgDip: First degree or equivalent, plus HR or management experience; other qualifications may be considered.

MSc (post-diploma): PgDip in HRM from Strathclyde or equivalent CIPD-approved qualification from another UK university. Candidates with a CIPD-awarded advanced qualification may also be considered.

## INTERNATIONAL HUMAN //// RESOURCE MANAGEMENT //

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Understand how multinational organisations can best mobilise a culturally-diverse workforce

Prepare for an HR career in global organisations

Gain professional membership of the Chartered Institute of Personnel and Development

Opportunity to undertake a work-based project

#### 

#### **Compulsory Classes**

- Business Skills
- HRM in a Business Context
- Leading, Managing and Developing People
- Comparative Employment Relations
- Labour and Diversity in a Global Context
- Research Methods for HR Professionals
- Critical Issues in HRM
- Managing HR in Multinationals

#### **Optional Classes (choose one)**

- · Employee Reward
- People Resourcing
- · Leadership in Organisations
- Psychometrics in Organisations
- SBS Spring School

### INTEGRATED DISSERTATION AND //////. RESEARCH REPORT

The Integrated Dissertation and Research Report provides an opportunity to analyse a live human resources issue in an organisation. This enables you to put into practice the knowledge and skills you have developed throughout the programme.

The Department has a network of HR professionals and assistance can be given by the Department to gain access to an organisation. If access to an organisation is unavailable, you will use a case study approach.

#### **DURATION OF PROGRAMME ////////////**

12 months full-time

#### 

Minimum second-class honours degree or overseas equivalent, in any subject.

## WORK & ORGANISATIONAL PSYCHOLOGY

MSc (full-time)

## WHY STUDY THIS PROGRAMME AT STRATHCLYDE?

Gain knowledge about applying psychology to people, work and organisations

Career options include occupational psychology, recruitment, and organisational development consultancy

Only British Psychological Society (BPS) accredited occupational psychology course in Scotland

Chartership route: gain a Stage 1 qualification towards professional membership of the Division of Occupational Psychology with the BPS

#### 

#### **Compulsory Classes**

- Assessment & Selection at Work
- Work, Health & Wellbeing
- Developing Talent
- Leadership, Engagement & Motivation
- Organisational Development & Change
- People Analytics & Professional Practice (Consultancy)
- Quantitative Research Methods
- Qualitative Research Methods

#### **Optional Classes**

- People, Technology & Work
- · Labour & Diversity in a Global Context
- Design of Usable Health Systems
- Health & Care Data Analytics & Decision Support
- Big Data Fundamentals
- Business Analytics
- People Analytics & Professional Practice (Foundations)

#### 

The dissertation is an independent empirical research project that will develop your analytical, research design, data analysis and communication skills.

#### **DURATION OF PROGRAMME //////////**

12 months full-time

#### 

Minimum second-class honours degree or overseas equivalent in psychology (Chartership route), or business, management, or other social science subject (non-Chartership route).

**EEMy experience at Strathclyde** has been phenomenal. I have loved every minute of the experience. The lecturers at Strathclyde Business School are experts in their field and this really comes across in the teaching. There is nothing they do not know about their subject and beyond.

**Callum Courtney** 

MSc Human Resource Management student

# APPLICANT INFORMATION

If you are interested in postgraduate study at the University of Strathclyde, our recruitment team can provide the help and advice you need to make your decision.

Our Recruitment & International Office (RIO) can give you information about applying and courses, and information specifically relevant to you. If you live outside the UK, the University has agents and representatives in many countries around the world.

## ENTRY REQUIREMENTS W//////

The University admits students with a range of both academic and professional qualifications. In addition to an appropriate academic qualification (generally a strong undergraduate degree, or equivalent qualification), some courses require relevant professional or work experience. If you are unsure whether your qualification is acceptable to the University, please contact us:

pgenquiries@strath.ac.uk (within UK/EU)

international@strath.ac.uk (non-UK/EU)

### 

Applications for most of our postgraduate taught programmes can be made online. There are no formal closing dates for postgraduate applications, but we advise you to contact the Department/ School you are applying to directly to see if your course has an application deadline. Applications are considered and decisions given on a rolling basis by most departments; exceptions will be specified in the relevant course entry in this prospectus. If you wish to be nominated by the University for any scholarship or funding, we recommend that you apply as early as possible.

### TAUGHT COURSES ///////////

Most taught courses take one year of study and normally start in September at the beginning of the academic year. Additional entry point now available in January for certain courses, please visit the website for the full list of programmes. Taught courses involve a combination of lecture and/or seminars, with an emphasis on group work and individual study. Many courses conclude with a project. These courses are intended to provide advanced knowledge or techniques in specialised aspects of subjects you studied more generally at undergraduate level.

Some taught courses also serve as conversion courses for those who wish to change disciplines, upgrade their knowledge within a discipline or prepare for further study. You will be assessed at various points throughout the academic year through examinations, assessed coursework, group work and seminars.

## RESEARCH DEGREES

Registration for research degrees normally takes place in September, but it is possible to start at other times. A research degree provides training in an area of study through original research and experiment, culminating in the preparation of a thesis setting out the conclusions of your research. You will be working on your own under the guidance of an academic supervisor and your progress will be monitored through meetings and submission of your research findings. As a postgraduate researcher you'll automatically become a member of the Strathclyde Doctoral School, a community of more than 1,800 doctoral researchers from over 80 countries.

### STUDY MODES

Many of our programmes can be undertaken fulltime, part-time, or on a modular basis. Distance or open-learning options are also available on some courses. Please note that non-EEA (European Economic Area) international students are not eligible for part-time study programmes based in the UK due to visa restrictions.

## 

Your career development is an integral part of your postgraduate education. Our Careers Service offers specialist support, advice, resources, and events for every stage of your career planning. As a Strathclyde graduate you will have access to our Careers Services for up to five years after graduation.

## INTERNATIONAL WAS STUDENTS

Each year, the University welcomes students from more than 100 countries. International students will normally require a Student Route visa in order to study in the UK. To apply for this visa students will require a Confirmation of Acceptance for Study (CAS) and also appropriate evidence of their funding. A CAS will be issued by the University when you accept our offer, meet any conditions mentioned in the offer, and pay a deposit. This deposit is offset against your tuition fees. If you have an official financial sponsor, for example your government or an international scholarship agency, you will not need to pay this deposit. Instead, you should send a copy of your sponsorship letter to the University's Finance Office for consideration. UK Visas and Immigration have very specific requirements relating to the level and nature of funding for studies and the supporting evidence needed when applying for a visa. You must provide evidence that you have the required level of funds relating to fees and maintenance (living costs). For further details, search 'visas' at www.strath.ac.uk.

## INTERNATIONAL STUDY W////////CENTRE

In partnership with Study Group the University has established an International Study Centre which offers international students who do not meet direct entry requirements the option to complete a Foundation or Pre-Masters programme at the Centre with successful students transferring to the University's undergraduate and postgraduate degree courses.

Visit http://isc.strath.ac.uk for information about the study plan options and pathways.

## ENGLISH LANGUAGE WWW.WWW.REQUIREMENTS

If English is not your first language, you must provide evidence of your proficiency. The UK government's preferred English Language test is IELTS. Please refer to our website for more details and note some courses may have different English language requirements. Please refer to individual course information for details. Students with alternative English Language qualifications or who have lived and studied in a majority English speaking country may not be required to take the IELTS test.

Please contact international@strath.ac.uk for further guidance.

## 

Students who do not meet the English Language requirements for the programme that they wish to study may enroll on a pre-sessional English course at Strathclyde prior to beginning their degree programme. All of our pre-sessional English programmes are accredited by BALEAP (British Association for Lecturers in English for Academic Purposes), and are designed to prepare students for the real tasks and situations that students will encounter in their studies.

For further information, search 'English language teaching' at www.strath.ac.uk.

#### International (non-EU/EEA) students

You should explore funding opportunities in your home country at the same time as applying for funding in the UK, eg Ministry or Department of Education, British Council Office, British Embassy or High Commission. International agencies such as UNESCO, the World Bank and the World Health Organisation operate funding schemes and some voluntary organisations and charities award modest scholarships.

Details on scholarships and funding sources are available at:

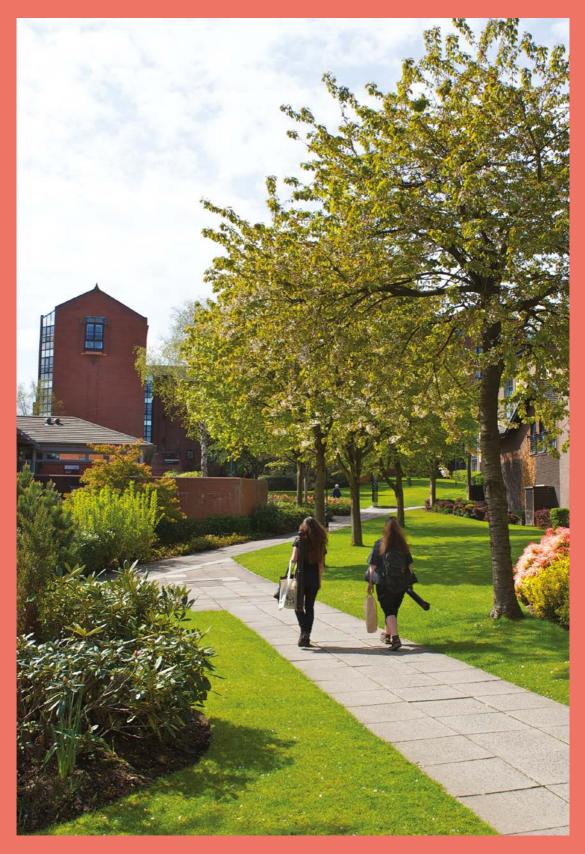
- ukcisa.org.uk
- iefa.org/scholarships
- studentmoney.org
- acu.ac.uk
- internationalscholarships.com
- postgraduatestudentships.co.uk
- britishcouncil.org
- prospects.ac.uk
- marshallscholarship.org

## FUNDING ENQUIRIES - WWW.WW.UK STUDENTS

The University's Student Financial Support Team offers financial support and advice to UK applicants and students. Assistance is available through the Discretionary and Childcare funds for students experiencing financial hardship.

### 

Places will be confirmed after firm offers of academic admission have been accepted by the applicant. Applications for accommodation must be submitted online.



Full details of entry requirements are given within each course entry. If you would like to find out more about a particular course, please use the contact details given in the entry.

Engineering Humanities & Social Sciences Science Strathclyde Business School

	PAGES
5G Advanced Communications	62
Actuarial Science	147
Advanced Architectural Design	33
Advanced Biochemistry	161
Advanced Chemical and Process Engineering	44
Advanced Chemical Engineering	42
Advanced Clinical Pharmacy Practice	162
Advanced Computer Science	139
Advanced Computer Science with Artificial Intelligence	140
Advanced Computer Science with Data Science	140
Advanced Drug Delivery	163
Advanced Electrical Power and Energy Systems	62
Advanced Engineering Studies	31
Advanced Immunology	161
Advanced Manufacture: Technology and Systems	54
Advanced Manufacturing: Foraging and Forming	54
Advanced Materials Engineering	73
Advanced Mechanical Engineering	74
Advanced Mechanical Engineering (with Aerospace/Energy Systems/Power Plant Technologies/Materials)	70
Advanced Mechanical Engineering by Modular Study	75
Advanced Mechanical Engineering with Industrial Placement	71
Advanced Naval Architecture	77
Advanced Pharmaceutical Manufacturing	163
Advanced Pharmacology	162
Advanced Physics	152
Advanced Residential Child Care	127
Advanced Software Engineering	141
Applied Economics	178
Applied Economics (online)	178

COURSE	PAGES
Applied Educational and Social Research	90
Applied Gender Studies	104
Applied Gender Studies (Research Methods)	104
Applied Physics	152
Applied Statistics	147
Applied Statistics in Finance	148
Applied Statistics in Health Sciences	149
Applied Statistics with Data Science	148
Applied Translation and Interpreting	105
Architectural Design (International)	33
Architectural Design for the Conservation of Built Heritage	34
Artificial Intelligence and Applications	141
Autism	91
Autonomous Robotic Intelligent Systems	63
Biofluid Mechanics	36
Biomedical Engineering (MRes)	36
Biomedical Engineering (MSc)	38
Biomedical Sciences	164
Business Analysis & Consulting	185
Business Analysis & Consulting (online)	185
Business and Management	196
Cancer Therapies	164
Chemical Technology and Management	44
Child and Youth Care Studies	128
Children and Young People in Conflict with the Law	129
Civil Engineering (with Optional Specialist Streams)	49
Civil and Environmental Engineering	48
Clinical Health Psychology	122
Clinical Pharmacy	165
Competition Law	118
Construction Law	112
Counselling and Psychotherapy	123
Creative Writing	105
Criminal Justice and Penal Change	112
Criminology and Social Policy	128
Data Analytics	186
Data Science for Politics and Policy-making	96
Design Engineering/with Advanced Product Development/Sustainability	55
Digital Health Systems	142
Digital Journalism	106

COURSE	PAGES
Digital Manufacturing	55
Digital Marketing Management	190
Diplomacy and International Security	106
Doctor of Education	87
Early Years Pedagogue	92
Economics & Finance	179
Economics & Policy of Energy & Climate Change	179
Education Studies (MSc)	91
Education Studies (MEd)	94
Educational Leadership	92
Educational Psychology	122
Electrical Power and Energy Systems	63
Electronic and Electrical Engineering	64
Energy Systems Innovation	42
Engineering Management for Process Excellence	56
Engineering Project Management	58
Entrepreneurial, Innovation & Technology	181
Environmental Engineering	50
Environmental Entrepreneurship	50
Finance	173
Finance & Management	175
Financial Technology (FinTech)	175
Forensic Science	158
Fundamentals in Forensic Science	158
Genealogical, Palaeographic and Heraldic Studies	133
Global Environmental Law and Governance	114
Health Analysis, Policy & Management	186
Health & Social Policy	109
Health History	131
Historical Studies	109
Human Resource Management (full-time & part-time)	199
Human Rights Law	114
Hydrogeology	51
Industrial Biotechnology	165
Information and Library Studies	144
Information Management	142
Innovation & Marketing Management	191
Interdisciplinary English Studies	108
International Accounting & Finance	173
International Banking & Finance	174

COURSE	
International Commercial Law	116
International Human Resource Management	200
International Management	196
International Marketing	191
International Master in Project Management	187
International Relations	98
International Social Welfare	131
Investment & Finance	174
Law	116
Law (LLB)	119
Leading Learning & Transformative Practice in Colleges (with TQFE)	89
Machine Learning and Deep Learning	64
Marine Engineering	78
Marine Engineering with Specialisation in Autonomous Marine Vehicles	78
Marketing	190
Master of Business Administration	195
Mechatronics and Automation	56
Media and Communication	108
Mediation and Conflict Resolution	117
Mental Health Social Work	129
Molecular Microbiology	166
Nanoscience	154
Neuroscience & Mental Health	167
Offshore Energy Transition	83
Offshore Floating Systems	85
Offshore Wind Energy	66
Offshore Wind Energy	83
Operational Research (online)	187
Pharmaceutical Analysis	166
Political Economy	100
Political Research	98
Politics	99
Postgraduate Certificate in Education (International)	93
Process Technology and Management	43
Product Design	57
Professional Doctorate in Advanced Practice (with optional specialisation)	134
Professional Graduate Diploma in Education	88
Professional Legal Practice (Diploma)	117
Professional Legal Practice	118
Programme in Humanities	103

#### POSTGRADUATE PROSPECTUS 2024 ENTRY

Project Management & Innovation	181
Prosthetics and Orthotics	39
Psychology with a Specialisation in Business or Health	123
Public Policy	99
Quantitative Finance	149
Rehabilitation Studies in Prosthetics and/or Orthotics	39
Renewable Energy & Decarbonisation Technologies	65
Research Methodology in Business & Management	171
Research Methods in Psychology	124
Safety and Risk Management	133
Satellite Data for Sustainable Development	72
Ship and Offshore Structures	82
Ship and Offshore Technology	80
Smart Grids	67
Social Innovation & Entrepreneurship	182
Social Policy/Social Policy (Research Methods)	130
Social Work	127
Software Development	144
Sport Data Analytics	124
Strategic FinTech (Bahrain)	197
Subsea and Pipeline Engineering	82
Supply Chain & Logistics Management/Procurement Management/Sustainability Management	57
Supply Chain & Logistics Management/Procurement Management/Sustainability Management	188
Sustainability and Environmental Studies	51
Sustainable Engineering Programme	30
System Engineering Management	58
Technical Ship Management	80
Technology Policy and Management	100
TESOL & Intercultural Communication	90
Tourism Marketing Management	192
Urban Design	34
Urban Policy and Analysis	101
Wind Energy Systems	66
Work and Organisational Psychology	200

# TERMS 3 MANUAL CONDITIONS

All students will be required as a condition to abide by and to submit to the procedures and rules of the University's Statutes, Ordinances, and Regulations as found in the University Calendar, as amended from time to time.

The University will use all reasonable endeavours to deliver courses in accordance with the descriptions set out in this prospectus. External factors or matters such as industrial action and the death or departure of staff may adversely affect the ability of the University to deliver courses in accordance with the descriptions. Also, the University has to manage its funds in a way which is efficient and cost-effective, in the context of the provision of a diverse range of courses to a large number of students.

#### The University therefore:

- a) reserves the right to make variations to the contents or methods of delivery of courses, to discontinue courses and to merge or combine courses, if such action is reasonably considered necessary by the University in the context of its wider purpose and any external constraints. If the University discontinues any course, it will use its reasonable endeavours to provide a suitable alternative course.
- **b)** cannot accept responsibility, and expressly excludes liability, for damage to students' property, transfer of computer viruses to students' equipment, and changes to teaching arrangements and similar activities.

This prospectus, published in September 2023, is for use by those interested in entering the University in the academic year beginning in January and September 2024. The contents of the prospectus are as far as possible up-to date and accurate at the date of publication. Changes are made from time to time and the University reserves the right to add, amend or withdraw courses and facilities, to restrict student numbers and to make any other alterations as it may deem necessary and desirable. The descriptions of courses in this prospectus are intended as a useful guide to applicants and do not constitute the official regulations which are available in the current edition of the University Calendar.

A guide to the admission requirements for the University's degree courses is given in each course entry, but please consult the University website <a href="https://www.strath.ac.uk">www.strath.ac.uk</a> for the most up-to-date information.

Photography © University of Strathclyde, Luigi Di Pasquale, Visit Scotland, Getty Images



#### The Place of Useful Learning

m University of Strathclyde, Glasgow, G1 1XN

- www.strath.ac.uk
- +44 (0)141 548 2814
- pgenquiries@strath.ac.uk (within UK/EU) international@strath.ac.uk (non-UK/EU)
- (O) unistrathclyde
- **X** UniStrathclyde
- f UniversityOfStrathclyde
- ▶ University of Strathclyde
- **d** unistrathclyde

The University of Strathclyde is a charitable body, registered in Scotland, number SC015263

