Master of Orthopaedic Surgery (MCh Orth, Dundee, UK) Course

Course Information

Department of Orthopaedic and Trauma Surgery
TORT Centre, Medical Education Institute
College of Medicine, Dentistry and Nursing, University of Dundee
Dear Candidate

Thank you for your interest in our MCh (Orth) Dundee, Postgraduate Course which was fully accredited by the Royal College of Surgeons of England in July 2013. We hope that you will find this information booklet helpful in deciding whether to pursue this particular course of study with us. Application forms for the course are handled by the University Postgraduate Office and are submitted through the UKPASS electronic application system. Due to the limited yearly places on the course please submit your application as soon as possible. You can find UKPASS web page at:

www.dundee.ac.uk/postgraduate/courses/orthopaedic_surgery_mchorth.htm

I hope to be able to welcome you to the Department and our University in the near future.

Yours faithfully

Professor Rami J. Abboud
BEng, MSc, PhD, ILTM, SMIEEE, Hon FRCS(Eng)
Head of Department
Course Director - Master of Orthopaedic Surgery
Orthopaedic and Trauma Surgery Department

The Department of Orthopaedic and Trauma Surgery, at the University of Dundee, was founded in 1967 when the University of Dundee split from St Andrews’ University and established an independent teaching medical school. The department is based in the Tayside Orthopaedic and Rehabilitation Technology (TORT) Centre. The current staff includes a professor, two clinical senior lecturers, two non-clinical senior lecturers, one clinical and one non-clinical lecturer, one research assistant, one clinical fellow, who are supported by various staff to make your stay with us as beneficial and enjoyable as possible.

The department has a tradition of teaching and research in the field of mechanisms of disease, treatment of disorders of the musculoskeletal system and biomedical and rehabilitation engineering. The founder, Professor Ian Smillie, gained a worldwide reputation in knee surgery and the role of the meniscus. His successor, Professor George Murdoch, founded and developed the Dundee Limb Fitting Centre and the Tayside Rehabilitation Engineering Services, which have acquired an international reputation for the treatment of the amputee and assessment of gait analysis. His successor, Professor David Rowley, sustained the department’s international reputation and innovation in the area of joints replacement complemented by a worldwide service in Clinical Audit Outcomes. The current Professor and Head of Department, Rami J. Abboud, is a Biomedical and Rehabilitation Engineer with over 20 years of Biomechanics and Clinical Motion Analysis expertise. He is the founder and current Director of the Institute of Motion Analysis and Research (IMAR) and has developed a number of groundbreaking initiatives originating with the establishment of the Foot Pressure Analysis Clinic and Laboratory in 1993 and subsequently IMAR in 2003. Professor Abboud is also the Course Director of the widely acclaimed Master of Orthopaedic Surgery (MCh Orth) course, Chairman of the College Intercalated BMSc honours degree and Associate Director of the Medical Education Institute.

In 1990 the Distance Learning Section was established and now has over 150 students from all over the world studying its programmes. The MCh Orth and the Intercalated Honours Degree in applied Orthopaedic Technology have been added to complete a comprehensive portfolio of research and taught courses designed to meet the growing demand for education in the rapidly developing field of musculoskeletal medicine, biomechanics and surgery. The Clinical Audit Services coordinate several important clinical research and audit studies, in association with various companies and health boards. The department holds major UK and European grants concerned with motion analysis and clinical audit in a range of different orthopaedic and biomechanical related pathologies.
Orthopaedic and Trauma Surgery Department

The TORT Centre, which was opened on the 1st September 1999, encompasses a combination of surgeons, engineers, orthotists, prosthetists and various specialised professionals to support our clinical/research activities. The TORT Centre houses a diverse number of specialists under one roof who are supported with state of the art high-tech equipment and five laboratories as part of the Institute of Motion Analysis and Research (IMAR). It is going to be our job to pass on our knowledge and fields of expertise to you during your stay with us.

In 2007, the department received from the American Orthopaedic Society for Sports Medicine (AOSSM) the Society's highest honour, the ‘2007 AOSSM Hall of Fame’, presented posthumously to Professor Ian Smillie for his significant contributions to the specialty of Sports Medicine.

In 2008, to reflect the multi-disciplinary aspect of the research carried out at the Orthopaedic and Trauma Surgery Department, the respective staff were returned in the Research Assessment Exercise (RAE 2008) into Unit of Assessment 25 (General Engineering - Biomedical Engineering) and Unit of Assessment 8 (Primary Care and Other Community-based Clinical Subjects) where 90% and 85% of our quality research profile was deemed of international class respectively.

In 2012, Professor Rami J. Abboud, was elected an Honorary Fellow of the Royal College of Surgeons of England. Honorary Fellowship is given to a very limited number of individuals of outstanding academic merit, or other outstanding contributions to the profession. Those who receive this rare accolade are usually world recognised in that particular speciality. The number of living not-medically qualified Honorary Fellows at any one time shall not exceed 30. This prestigious accolade that has been bestowed upon Professor Abboud by the College further cements our reputation as one of the leading institutes for teaching, research and training in Orthopaedic and Trauma Surgery and Biomechanics.

In 2013 the MCh (Orth) Dundee, course was granted full accreditation by the Royal College of Surgeons of England. This accreditation is extremely important and comes as the department is celebrating the 20th anniversary of the course. This is the only face-to-face course accredited by the College outside of England.
All MCh (Orth) Dundee, UK students are offered clinical attachment with a consultant orthopaedic surgeon at Ninewells Hospital, NHS Tayside for course duration.
Taught Postgraduate Courses

The Department contributes to the teaching of undergraduate medicine in the exciting new integrated Dundee Medical School curriculum. It also addresses postgraduate education and, besides training specialist registrars and clinical fellows has specifically designed the postgraduate courses as listed below:

- Master of Orthopaedic Surgery (MCh Orth, Dundee, UK)  
  accredited by the Royal College of Surgeons of England
- Diploma/MSc on Orthopaedic Science  
  accredited by the Royal College of Surgeons of England
- Diploma/MSc in Motion Analysis
- Diploma/MSc in Orthopaedic and Rehabilitation Technology
- Diploma/MSc in Sports and Biomechanical Medicine
- Postgraduate Certificate Course in Clinical Audit and Research for Healthcare Professionals

The Department also contributes to the following postgraduate courses:

- MSc in Healthcare Law and Ethics
- MSc in Human Identification
- MSc in Research - Health and Social Care

“It was a great learning experience. Coming here, my overall personality has changed. I have learnt the right way to write a thesis and also got to know the recent advancements in field of Orthopaedic surgery”

International Student Barometer, 2009
MCh (Orth) Course

The aims and objectives of the course are to provide a masters degree consisting largely of taught elements in order to cover the syllabus of orthopaedic surgery from clinical and mechanistic view-points. An educational platform will be built to complement the training aspects of orthopaedics by ensuring basic principles are firmly established.

The course consists of two semesters. Bioengineering material will provide you with basic science and permitting you, as clinicians, to associate with relevant engineering materials. A formal programme of lectures, tutorials, dry bone workshops, Thiel soft-embalmed cadaver workshops, anatomy demonstrations and multimedia demonstrations are provided and these include:

- Foot and Ankle
- Knee
- Spine
- Infection
- Biomechanics
- Orthopaedic Technology
- Orthotics
- Foot Pressure Analysis
- Sports Injury
- Hand and Wrist
- Paediatric Orthopaedics
- Trauma
- Pathology
- Implants
- Statistics in Medical Research
- Prosthetics
- Gait Analysis
- Hip and Pelvis
- Shoulder and Elbow
- Tumour
- Disability Medicine
- Introduction to Mechanics
- Mechanics of Materials
- Seating and Wheelchairs
- Motion Analysis

"Completing the MCh Course in Dundee was one of the ultimate achievements in my career. I consider it as an essential course for all orthopaedic surgeons who aspire to achieve orthopaedic excellence”

Dr Parag Sancheti (Medical Director, Sancheti Orthopaedic Institute, Pune) - MCh (Orth) Dundee Graduate 2003
Why study with us?

You may be wondering why choose to study this particular MCh (Orth) course. There are four main reasons why we think you should:

- The course is fully accredited by the Royal College of Surgeons of England
- As a UK postgraduate medical qualification, the MCh (Orth) awarded by the University of Dundee, is recognised by the Medical Council of India (MCI) as a valid postgraduate qualification
- **Best lecturing faculty** drawn from specialists across the entire UK (see opposite)
- **Best research experience** in clinical and biomechanics in association with the Institute of Motion Analysis and Research, one of the leading facilities in biomechanics and motion analysis worldwide
- Associated **clinical attachment** for course duration with no need for GMC registration

We have been successfully educating orthopaedic surgeons for 20 years and to date we have over 350 graduates from countries around the world. We continue to offer the highest standard of visiting external lecturer and orthopaedic lecture topics to be found anywhere and on any other similarly titled course; arthritis, foot and ankle, gait and motion analysis, hand and wrist, biomechanics, hip and knee, paediatrics, imaging techniques, shoulder and elbow, trauma, wheelchairs and seating systems, spine, research, statistical analysis and many other associated specialities.

Many of our graduates have gone on to highly successful careers once returned to their own countries with many taking up new challenges and opportunities within the UK up to Consultant position. Several have published widely in journals and at conferences and have even gone onto Fellowships throughout Europe and employment in the UK.

This unique course offers a truly wide ranging curriculum that will help you to achieve your career goals no matter what your speciality. Our distinguished visiting lecturers are specialists at the forefront of innovative orthopaedics and continue to return each year to teach as they understand the value and benefit of this course to working surgeons. They care deeply about the course and what it has achieved over the last 20 years and without their support we would not have been able to be so successful.
Distinguished External Lecturers

The following are just a snapshot of the high quality of external lecturers that you will hear only on the MCh Orth (Dundee) Course. A comprehensive list can be found at the Department’s website [www.orthopaedics.dundee.ac.uk](http://www.orthopaedics.dundee.ac.uk)

<table>
<thead>
<tr>
<th>Name</th>
<th>Role and Institution</th>
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<tbody>
<tr>
<td>Mr Mohamed Arafa</td>
<td>Consultant Orthopaedic Surgeon and Postgraduate Dean (West Midlands Deanery)</td>
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<td>Professor Roger Atkins</td>
<td>Consultant Orthopaedic Surgeon (Bristol Hospital)</td>
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<tr>
<td>Mr Alf Bass</td>
<td>Consultant Orthopaedic Surgeon (Alder Hey Children’s Hospital, Liverpool)</td>
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<tr>
<td>Mr Chris Blundell</td>
<td>Consultant Orthopaedic Surgeon (Northern General Hospital, Sheffield)</td>
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<tr>
<td>Mr Andrew Brooksbank</td>
<td>Consultant Orthopaedic Surgeon (Glasgow Royal Infirmary)</td>
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<tr>
<td>Mr Colin Bruce</td>
<td>Consultant Orthopaedic Surgeon (Alder Hey Children’s Hospital, Liverpool)</td>
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<tr>
<td>Mr Simon Carter</td>
<td>Consultant Orthopaedic Surgeon (Royal Orthopaedic Hospital, Birmingham)</td>
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<tr>
<td>Mr Tim Clough</td>
<td>Consultant Orthopaedic Surgeon (Wrightington Hospital, Wigan)</td>
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<tr>
<td>Mr Raman Dega</td>
<td>Consultant Orthopaedic Surgeon (Wrexham Park and Heatherwood Hospital Trust)</td>
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<tr>
<td>Mr John Dorgan</td>
<td>Retired Consultant Orthopaedic Surgeon (Alder Hey Children’s Hospital, Liverpool)</td>
</tr>
<tr>
<td>Mr Alastair Gibson</td>
<td>Consultant Orthopaedic Surgeon (Royal Infirmary of Edinburgh)</td>
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<tr>
<td>Mr J Haines</td>
<td>Consultant Orthopaedic Surgeon (Wrightington Hospital, Wigan)</td>
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<tr>
<td>Mr Kartik Hariharan</td>
<td>Consultant Orthopaedic Surgeon (Royal Hospital, Gwent)</td>
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<tr>
<td>Mr C Kumar</td>
<td>Consultant Orthopaedic Surgeon (Glasgow Royal Infirmary)</td>
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<tr>
<td>Mr Malcolm Macnicol</td>
<td>Consultant Orthopaedic Surgeon (Royal Infirmary of Edinburgh)</td>
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<tr>
<td>Mr Nicola Maffulli</td>
<td>Professor of Sports and Exercise Medicine (Barts and the London School of Medicine)</td>
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<tr>
<td>Mr Ashish Mahendra</td>
<td>Consultant (Nuffield Health Glasgow Hospital)</td>
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<tr>
<td>Mr Nilesh Makwana</td>
<td>Consultant Trauma and Orthopaedics (Robert Jones &amp; Agnes Hunt Hospital Wrexham)</td>
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<tr>
<td>Mr Steve Parsons</td>
<td>Consultant Orthopaedic Surgeon (Royal Cornwall Hospital, Truro)</td>
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<tr>
<td>Mr Videsh Raut</td>
<td>Consultant Orthopaedic Surgeon (Wrightington Hospital, Wigan)</td>
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<tr>
<td>Dr Parag Sancheti</td>
<td>Professor and Medical Director (Sancheti Orthopaedic Institute, Pune, India)</td>
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<tr>
<td>Dr Tom Smith</td>
<td>Consultant Orthopaedic Surgeon (Sheffield)</td>
</tr>
<tr>
<td>Professor John Stanley</td>
<td>Consultant Orthopaedic Surgeon (Wrightington Hospital, Wigan)</td>
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<tr>
<td>Mr Ian Trail</td>
<td>Consultant Orthopaedic Surgeon (Wrightington Hospital, Wigan)</td>
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Course Testimonials

**Dr Parag Sancheti**  
*Professor and Medical Director, Sancheti Orthopaedic Institute, Pune, India - MCh (Orth) Dundee, Graduate and Presentation Skills Award (2003)*

Completing the MCh (Orth) course in Dundee, UK, was one of the ultimate achievements in my career. In my opinion this particular MCh (Orth) course is worth the time and money spent. I strongly recommend this course for enhancing all-round development in orthopaedics and also for sharpening research and academic communication skills with special emphasis on producing a well written and structured dissertation for peer review publication. Gaining the Dundee MCh (Orth) degree, which is a foreign qualification, will also add value to your CV and improve your job prospects and orthopaedic career. I consider it as an essential course for all orthopaedic surgeons who aspire to achieve orthopaedic excellence.

**Dr Vikram Arun Mhaskar**  
*Consultant Orthopaedic Surgeon, Knee & Shoulder Clinic, New Delhi, India - MCh (Orth) Dundee, Graduate and David Rowley Presentation Skills Award (2013)*

The Dundee MCh (Orth) course is an experience no orthopaedic surgeon should miss if he or she desires professional excellence. The course inculcates a desire to excel as a research oriented orthopaedic surgeon well versed with the latest techniques of surgery that is extremely important to succeed in life. The wonderful facilities available at the centre, including a fully equipped sports laboratory, go a long way in facilitating cutting edge research. The clinical attachments with stalwarts in the field of orthopaedic surgery add a finishing touch to our existing knowledge on techniques of surgery. The staff in the department are very friendly, helpful and approachable making life as smooth as possible during the course. I would go onto say that the course is a stepping stone to reach greater heights as a decisive, confident orthopaedic surgeon. I have some of my fondest memories in life during my stay in Dundee and my interactions with Professor Abboud and hope the course continues to produce gems in the field of orthopaedic surgery.

**Mr Arpit Jariwala**  
*Upper Limb Fellow, Upper Limb Unit, Wrightington Hospital, England - MCh (Orth) Dundee, Graduate and Ian Smillie Class Award of Distinction (2003)*

The MCh (Orth) course in Dundee, UK is unique as it offers comprehensive orthopaedic experience essential for orthopaedic surgeons looking to gain further specialist knowledge and skills in addition to a UK qualification. Excellent teaching faculty, diverse lectures, numerous orthopaedic workshops and extremely helpful staff are the highlights of this course. In addition, the distinctive access to both elective and trauma theatres and clinics help surgeons to gain knowledge regarding the evidence-based management of various orthopaedic conditions. In addition to gaining a UK qualification, the course helped me gain a place on the Higher Orthopaedic training rotation in UK and fully supported me for my present Upper Limb Fellowship at the prestigious Wrightington Hospital.

... an essential course for all orthopaedic surgeons who aspire to achieve orthopaedic excellence.

... the clinical attachments with stalwarts in the field of orthopaedic surgery add a finishing touch to our existing knowledge on surgical techniques.

... excellent teaching faculty, diverse lectures, numerous orthopaedic workshops and extremely helpful staff are the highlights of this course.
Course Testimonials

Dr Rahul Agrawal

The MCh (Orth) Dundee course, which I completed in 2009 was the best experience I have had in my career. I consider this to be the most important and highly essential course for one to achieve excellence in the field of orthopaedics. I had an opportunity to work with some of the best surgeons in the UK during the training period. We had regular classes along with group discussions, which in turn enhanced my all-round development in Orthopaedics as well as sharpening my research and communication skills. I’m sincerely thankful to Dr Parag Sancheti, who guided me during my postgraduate days in Pune and who urged me to apply for the MChOrth, Dundee course, which was a career milestone that has enhanced my future prospects. Professor Abboud always inspired me to do the best and I sincerely hope the course continues to guide future aspiring orthopaedic surgeons.

Dr Rajesh Garg
Consultant Orthopaedic Joint Replacement Surgeon, Max Hospital, Delhi, Tirath Ram Shah Hospital, Delhi - MCh (Orth) Dundee, Graduate and Ian Smillie Class Award of Distinction for best overall student (2007)

My learning experience in Dundee in 2007 was a fantastic journey. It took me two years to gain admission onto the MCh (Orth) course due to the huge volume of applicants but it was well worth the wait as the course was better than all my expectations. There were continuous academic lectures (something lacking during our postgraduate training) by an incredible faculty. There were days allotted for lectures and also operating theatre days during which I attended and assisted various surgeries including joint replacement, arthroscopy and spinal surgery. During theatre time I learnt all the finer details and the 'tricks of the trade' that I now apply to my own flourishing practice of joint replacement surgery. I arrived in Dundee from India with my wife and nine-month old daughter. I left Dundee having added to both my surgical and social skills and also with the prized MCh (Orth), Dundee degree which helped to kick-start my orthopaedic career back home in 2007.

Dr Dhiraj Marothi
Arthroplasty Surgeon, Shalby Hospital, Ahmedabad, India - MCh (Orth) Dundee, Graduate (2009)

In 2009-2010 while pursuing my masters of Orthopaedics Surgery in Dundee, I was clinically attached with Mr AS Jain where I was exposed to specialty in lower limb reconstruction as well as foot and ankle and attended to OPD and indoor patients. I did my research project on "How much have we lowered our threshold for patient selection for hip arthroplasty in the last 10 years?". The MCh, Dundee course gave me a sound grounding in basic knowledge of orthopaedics and trauma surgery. I enjoyed my time in Dundee and on successfully completing my degree there I stayed for a further six months working in Ninewells Hospital. During this tenure I got selected in Brigand Wales because of clinical experience of UK. Meanwhile I got call from Shalby Hospitals, India. In the last four years, I have done more than 3000 knee replacements. I personally feel the specialised MCh experience helped greatly in advancing my career in India.
Institute of Motion Analysis and Research

The Institute of Motion Analysis and Research (IMAR) was established by Professor Abboud in 2003 by combining the Foot Pressure Analysis Laboratory, the Materials Testing Laboratory, the Disability Research and Assessment Laboratory and the Dundee Gait Laboratory. A new laboratory dedicated to Sports Biomechanics was completed in January 2007 to augment and support the current facilities of IMAR. IMAR’s main goal is to promote excellence in teaching and research and to provide a comprehensive clinical service in the field of motion analysis.

It has been possible to study gait in Dundee due to the establishment of a dedicated Gait Laboratory that was set up as far back as the 1960s, a Foot Pressure Analysis Laboratory in 1993 and most recently the Institute of Motion Analysis and Research (IMAR) in 2003. We are now in the position of providing a unique and comprehensive clinical service in motion analysis at IMAR, which incorporates a plethora of the latest state-of-the-art gait, sport, pressure and motion analysis equipment within five interlinked laboratories facilitating close and solid collaboration between Engineers, Physiotherapists, Orthotists, Prosthetists, Podiatrists, Surgeons and Physicians.

Research
The Department of Orthopaedic and Trauma Surgery’s current areas of research include:

- Joint Replacements
- Biomechanics
- Sports
- Motion Analysis
- Foot Pressure Analysis
- Footwear Biomechanics
- Orthotics
- Gait Analysis
- Medical Instrumentation
- Finite Element Analysis
- Osteoporosis
- Prosthetics
- Seating and Wheelchairs
- Bone Density
Institute of Motion Analysis and Research

Foot Pressure Laboratory
This unit was established in 1988 and was consolidated by the work of Professor Rami Abboud, Honorary Consultant Clinical Scientist with special interest in lower limb biomechanics. The laboratory is equipped with the latest state of the art biomechanical equipment, which are used both for research developments and clinical service.

Gait Analysis Laboratory
There has been a laboratory in Dundee since 1968, consisting of a custom-made, strain gauged force platform built into a raised walkway and two Bolex cameras which were mechanically synchronised. The laboratory obtained its first electronic motion analysis system in 1977 at which time it also purchased two precision force platforms. This prototype system was replaced with its commercially manufactured equivalent in 1985 and this was subsequently replaced with the next generation Vicon System, Vicon VX, in 1991. The Dundee Gait Lab continues to strive to improve the quality of its facilities and the service it provides and to this end the system was upgraded to a Vicon 370 system in 1999, to a Vicon 612 in 2005, to a Vicon MX-13 in 2007 to a Vicon MX-40 and T20 in 2008 and 2010 respectively. The latter four since its association with IMAR.

Sports Biomechanics Laboratory
This is a purpose-built 32 meter long laboratory incorporating the latest high-tech motion analysis systems dedicated for sports assessment and research. The systems include: a 12 camera Vicon MX13 and 6 camera Vicon T20 system with two high resolution AMTI force plates mounted on modular rails to accommodate various sports setups; two 100HZ Basler colour digital cameras; the Novel Emed-X sports pressure platform (400 Hz), the Novel Pedar-X inshoe pressure system; the Novel Pliance bike pressure system; the Novel Pliance saddle pressure system and the Novel Pliance seating mats.

Bone Density and Signal Processing
Modern computers permit us to explore the complex information available from common or garden clinical images such as radiographs. The black and white image we are so familiar with if stored digitally contains quite complex information regarding the structure of bone, for example. Using Fourier transforms of wave analysis we have made very accurate predictions about bone structure which are of interest in predicting the likelihood of fracture in osteoporotic bone. The Bone Density Group is exploring the use of this highly complex signal processing analysis in the clinical decision making process using neural networks.
# Programme Structure

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<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
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<tbody>
<tr>
<td><strong>1. Basic Sciences (Biomechanics)</strong></td>
<td><strong>3. Clinical Science (lower Limb and Spine)</strong></td>
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<tr>
<td>Rigid Body Mechanics</td>
<td>Spine</td>
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<tr>
<td>Structural Mechanics</td>
<td>Foot and Ankle</td>
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<tr>
<td>Medical Statistics</td>
<td>Knee</td>
</tr>
<tr>
<td>Academic Communication</td>
<td>Hip and Pelvis</td>
</tr>
<tr>
<td>Upper Limb Biomechanics</td>
<td>Tumour and Infection</td>
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<tr>
<td><strong>Multiple Choice Exam</strong></td>
<td><strong>Multiple Choice Exam</strong></td>
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| **2. Clinical Science (Upper Limb and Paediatrics)** | **4. Applied Basic Science (Technology and Rehab)** |
| Shoulder and Elbow | Medical Statistics Workshops |
| Hand and Wrist | Hip, Knee Biomechanics |
| Paediatric Orthopaedics | Prosthetics |
| Tumour | Wheelchairs |
| Upper Limb and Paediatric Trauma | Orthotics |
| **Multiple Choice Exam** | **Motion Analysis** |
| **Multiple Choice Exam** | **PowerPoint Presentations** |

| **3. Research Project Semesters ONE and TWO** | **Objective Structured Clinical Exam (OSCE)** |
| Research and Audit Skills | **PowerPoint Presentations** |
| PowerPoint Progress Presentations | **VIVA** |
| Dissertation | **Paper and Poster Presentations** |
| Prosthetics | **PowerPoint Presentations** |
| Wheelchairs | **Objective Structured Clinical Exam (OSCE)** |
Assessment

Course assessment is divided into three elements:

- On-line multiple choice question (MCQ) examination for each semester (in December and May)
- Thesis (to be submitted in April)
- Objective Structured Clinical Examination (OSCE) and VIVA Examination (in May)

A candidate must satisfy the examiners in all parts of the examination by passing each element to qualify for the award of the degree. Candidates will be examined orally on the subject of their thesis. Please note that there are no re-sit facilities.

Candidates shall normally attend the exam date as specified at the beginning of each semester except with the special permission of the Course Director and the College Board and under any other special circumstances.

Marking Scheme

Candidates shall be required to satisfy the examiners for the Degree through the following percentages:

- 50% overall average in the written papers over the two semesters
- 50% overall average in the OSCE examination
- pass in the dissertation and viva voce

The following percentages will decide the winner of the Ian Smillie Class Award of Distinction:

- written examination - 30%
- OSCE examination - 40%
- dissertation/VIVA - 30%

The Ian Kelly and David Rowley Awards for Paper and Presentation Skills will be decided by an expert panel of external and internal examiners.
Course Fees

Fees are set each year on 1st September. Course fees for 2014-15 are as follows:

<table>
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<tr>
<th>Course Fee</th>
<th>2013/2014</th>
<th>2014/2015</th>
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<tr>
<td>MCh (Orth) Course</td>
<td>£14,300</td>
<td>£14,700</td>
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Source of funding: candidate’s own funding

As there are a limited number of places for this programme, all applicants are required to make a pre-payment of 50% of the full tuition fee within eight weeks of accepting an unconditional offer. If an applicant receives a conditional offer, all conditions must be met before an unconditional offer is issued. Please note that this amount will be deducted from tuition fees and the advance payment is not an additional cost. If an application is withdrawn at a later date an administration fee of GBP1000 is non-refundable for all applicants. If the pre-payment is not received within the eight-week period applicants are notified of the University’s intention to withdraw the application and the place will be offered to another applicant.

Applications for this course can be made at: www.ukpass.ac.uk

When applying please ensure that the following documents are attached:

- Copies of all degree certificates
- Copy of your current CV
- References from 2 academic/clinical referees
- Copy of your IELTS or TOEFL English language requirement certificate

For further information about all things MCh (Orth), for assistance in applying for Visas and of what to expect from your time in Dundee please visit the Department’s website (www.orthopaedics.dundee.ac.uk).
Regulations

1. Candidates for admission to a course of study leading to the Degree of Master of Orthopaedic Surgery (MCh Orth) must have obtained:

   I. MB ChB Degree or an equivalent qualification
   II. must normally possess a further postgraduate qualification, e.g. the Master of Surgery in Orthopaedics or Diplomate of the National Board in Orthopaedics from India; or an equivalent postgraduate specialist qualification
   III. and normally at least four years post registration experience in Orthopaedics.

2. It is imperative that students obtain a student visa for the whole duration of the course with the appropriate funds (course fees, consumables and living expenses). Failure to have a student visa and appropriate funds will result in you being unable to matriculate or pursue the course.

3. All applicants are required to make a pre-payment of 50% of the full tuition fee within eight weeks of accepting an unconditional offer. If an applicant receives a conditional offer, all conditions must be met before an unconditional offer is issued. This amount will be deducted from tuition fees and the advance payment is not an additional cost. If an application is withdrawn at a later date an administration fee of GBP1000 is non-refundable for all applicants. If the pre-payment is not received within the eight-week period applicants are notified of the University’s intention to withdraw the application and the place will be offered to another applicant.

4. The full-time course leading to the Degree extends over one academic year, comprising two semesters. Entry to the course occurs annually in September and concludes in the following June. There is no facility for candidates to pursue this course of study on a part-time basis.

5. i. The Course Director shall appoint a person or persons to supervise the work of the candidate. The candidate shall report to the supervisor(s) on such occasions and in such manner as the supervisor(s) may require. Failure to attend 10% or more of the lectures/tutorials/workshops in any one semester, without a valid reason approved by the Head of Division or Course Director, may mean that candidates are unable to complete the academic requirements of the course and may result in studies being terminated.

   ii. Fees will be forfeited if the candidate’s studies are terminated due to lack of diligence on the part of the candidate.
6. The College Board, on the recommendation of the supervisor or supervisors, shall approve the programme of work for a candidate. The candidate will be required to attend courses of lectures or other instruction and to pass all examinations associated with such courses of lectures or instruction at a level satisfactory to the Head of Division or Course Director.

7. The programme of work shall consist of courses of study together with a special study as well as of a research project. A candidate shall submit a dissertation embodying the results of his/her special study or research project, a PowerPoint, a poster and a full paper.

8. The examination shall consist of three elements: two written papers (one per semester), an OSCE examination and an assessment of the dissertation. A candidate must satisfy the examiners in all parts of the examination, passing each element to qualify for the award of the Degree. The candidate will be examined orally on the subject of the dissertation. **There is no re-sit facility.**

9. (a) Candidates shall be required to satisfy the examiners for the Degree through the following percentages:

   (i) 50% overall average in the written papers over the two semesters
   (ii) 50% overall average in the OSCE examination
   (iii) pass in the dissertation and viva voce

(b) The following percentages will decide the winner of the Ian Smillie Class Award of Distinction:

   (i) written examination - 30%
   (ii) OSCE examination - 40%
   (iii) dissertation/VIVA - 30%

(c) The Ian Kelly and David Rowley Awards for Paper and Presentation Skills will be decided by an panel of external and internal examiners.

(d) The candidate shall normally attend the exam dates as specified at the beginning of each semester except with the special permission of the Course Director and the College Board and under any other special circumstances.

(e) The Head of Division or Course Director shall determine the dates for the examination and shall also decide upon the date by which dissertations are to be submitted. In exceptional circumstances, and with the approval of the Course Director, late submission of a dissertation may be accepted.
Regulations

10.  (a) In all cases, the syllabus of courses and subjects for examinations shall be approved by the College Board.

(b) Courses of study within the University may include instruction in other institutions approved by the College Board.

11. If a candidate is prevented by illness or other sufficient cause from beginning or completing the written part of the examination, the examiners may, at their discretion, recommend to the College Board that the candidate be permitted to enter for the written examination at a later specified diet.

12. A candidate shall submit three hard (printed) copies and one electronic copy of the Dissertation and one hard copy and an electronic copy of the Paper in a style approved by the Head of Division or Course Director in collaboration with an external examiner(s), who shall be appointed by the University Court on the recommendation of the Senatus, as advised by the College Board and who shall act as an external examiner(s) for the final examination for the Degree.

13. The report and recommendation of the examiners shall be submitted to the Senatus by the Head of Centre or Course Director and shall take into account the candidate’s performance in the written examinations, OSCE examination and the standard achieved in the dissertation/VIVA.

“In addition to gaining a UK qualification, the course helped me gain a place on the Higher Orthopaedic training rotation in UK and fully supported me for my present Upper Limb Fellowship at the prestigious Wrightington Hospital.”

Mr Arpit Jariwala (Upper Limb Fellow, Wrightington Hospital, UK) - MCh (Orth) Dundee Graduate 2003
From its very beginning the University of Dundee was both inspirational and down to earth; traits that remain its fundamental watermark today. The Nobel Laureate, Seamus Heaney, described the University as an institution ‘with its Head in the clouds and its feet firmly on the ground’. Perhaps the most apt description of the University’s ethos comes from one of its founding fathers, Patrick Geddes, who advised that ‘By creating we think, by living we learn’.

The University’s origins date back over 100 years to the founding of University College Dundee in 1881. The driving force was a rising demand for the extension of liberal education and the advancement of technical instruction. Today the University of Dundee has a strong emphasis on the professions, educating more than 70% of its students into the non-business professions ~ medicine, dentistry, nursing, law and architecture ~ more than any other Scottish university. It also has thriving arts and science colleges.

With women accounting for over 60% of our student population, the University has long since fulfilled and surpassed the earlier vision of Mary Ann Baxter ‘promoting the education of persons of both sexes in the study of science, literature and the fine arts’. That quote translates today to excellence in teaching and research and contributing to the social, economic and cultural life of Scotland.
About the University of Dundee

The high quality of teaching and research at the University, together with the satisfaction ratings of our students, have contributed to a series of high rankings and accolades:

- Students voted Dundee University number one in Times Higher Education Student Experience Survey, 2013
- The Guardian University Guide 2012 places Dundee Medical School in 4th place in UK
- The University ranked 140 among the world’s top 200 universities in the Times Higher Education 2010-11 World University Rankings
- One of the world’s top seven ‘intelligent communities’ ~ US think-tank Intelligent Community Forum, 2010
- Dundee has been chosen as the site for the Victoria and Albert (V&A) museum development outside London, 2010
- Ranked 1st in the UK ‘for good teachers and learning support’ ~ International Student Barometer, 2009
- Second in Scotland for all-round student experience ~ Times Higher Education Student Experience Survey, January 2009
- Best scientific workplace in Europe ~ Poll of International Scientists, 2008 and 2009
- Ranked 1st in the UK for its Medical Course ~ Guardian Educational league table, 2008 and 2009
- Ranked 1st in the UK for Dentistry ~ Independent and Guardian, 2008
- One of the UK’s top 20 universities ~ The Guardian, 2008
- One of the UK’s top 20 for research ~ Research Fortnight, 2008
- Shortlisted as University of the Year ~ Times Higher Education Awards, 2008
- Ranked 3rd in the UK for scientific research impact ~ The Guardian and Thomson Scientific Index, 2008
- One of the world’s top 250 universities and the fastest rising Scottish university ~ Times Higher Education Awards, 2007
- Since the completion of the £21 million Sir James Black Centre for Interdisciplinary Research, the University has a larger medical research complex than the National Institute of Medical Research in London
- Dundee is among the UK’s highest generators of per capita research income, much of it focused on medical and biomedical research □
Contact Information

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University of Dundee
Dundee, DD1 9SY
Scotland, United Kingdom

The Department runs the following courses:

Postgraduate Taught Courses
Master of Orthopaedic Surgery (MCh Orth) - *RCS England Accredited*
Diploma/Master in Orthopaedic Science - *RCS England Accredited*
Diploma/MSc in Motion Analysis
Diploma/Master in Orthopaedic and Rehabilitation Technology
Diploma/MSc in Sports and Biomechanical Medicine
Postgraduate Certificate in Clinical Audit and Research for Healthcare Professionals

Postgraduate Research Courses
MSc/MPhil/PhD in the area of Motion Analysis
MSc/MPhil/PhD in Musculoskeletal Biomechanics
MSc/MPhil/PhD in Biomedical Engineering
Doctor of Medicine (MD)

Undergraduate Courses
BMSc in Applied Orthopaedic Technology

Continuing Professional Development Certificate Courses
Clinical Statistics
Orthopaedic Medical Technology
Plaster Technology

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