MANCHESTER 1824
The University of Manchester

Diploma in Hand Surgery

Programme Handbook

School of Medicine

Faculty of Medical and Human Sciences

and

British Society for Surgery of the Hand

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1. INTRODUCTION

1.1 Welcome statement from BSSH

We are very pleased to welcome you as a trainee or consultant with an expressed interest in Hand Surgery. The purpose of this Handbook is to act as a reference and resource for those who are contemplating or have signed up to the Diploma programme. It aims to inform you of the steps needed to enrol on and then successfully participate in the course. It is worthwhile to read before you commence your studies and should then be kept for future reference.

The British Society for Surgery of the Hand (BSSH) has, since its inception in 1968, promoted good practice and training in hand surgery. Serial developments have included establishment of: annual national and international meetings, the British, now European Journal of Hand Surgery, a full program of practical and instructional courses (including those in liaison with the Raven Department of Education at the Royal College of Surgeons of England) and a system of national fellowships in hand surgery (Advanced Training Posts).

Members of the BSSH have felt it timely to develop a specified program of study leading to a formal qualification in hand surgery. Not only will the Diploma confer advantage to you in terms of receiving quality training but there are specific gains to the profession of which you will later be a part. The Diploma has been conceived in partnership and as a validated agreement with the University of Manchester (UoM). The Diploma is awarded by the University as postgraduate qualification after completion of a specified syllabus followed by success in a final examination.

The Diploma:

- Defines the standard of the practising hand surgeon in the UK
- Promotes recognition of Hand Surgery as a postgraduate specialty
- Allows the profession to define its own paradigm of specialist education
- Tests the training program – 'closing the training loop'

In addition:

- Formal examination enjoys confidence of both profession and public as a signal of attainment and competence
- Elements of the program could be incorporated into future revalidation of all practising hand surgeons

The Hand Diploma will run on a 'distributed-learning' basis which we take to mean '*a programme of instruction taking place at sites remote from Manchester University and at specialist hand surgery centres around the United Kingdom and Republic of Ireland*.' 'In-house' teaching and assessment is supported by the national system of practical and lecture courses and conferences affiliated to the programme.

The Handbook will tell you about:

- Aims of the Hand Diploma programme
- Learning with the BSSH / University of Manchester
- Provisions for support and supervision
- Administrative and assessment regulations

1.2 Key elements of the programme

1.2.1 Eligibility criteria

As the participating surgeon you will need to hold a basic medical qualification registered with the General Medical Council and be appointed to a recognized specialist orthopaedic or plastic surgery training programme with successful passage through the yearly assessments. ***You will be able to enter the programme after completion of year 4.*** In addition you will need to have passed the Intercollegiate Specialty Fellowship in Orthopaedic or Plastic Surgery before you can complete the Diploma. (For overseas candidates taking the Diploma while in the UK they will need to obtain a letter from the relevant UK regulatory authority (at present this is the PMETB) that the qualification they have is equivalent to the FRCS (Orth or Plast)).

Before completing the Diploma you will need to have undertaken, a minimum of six months advanced hand surgery training in a recognized Hand Fellowship. This experience should be over and above that undertaken for the Intercollegiate Specialty Fellowship and thus is more likely to be undertaken after obtaining the FRCS (Plast or Orth). The Hand Fellowship may be undertaken overseas provided the Diploma committee is satisfied that it is suitable for Advanced Hand Surgery Training. This experience may be gained within your existing rotation following agreement of your rotation's Programme Director. It is the mutual responsibility of the participating surgeon and the supervising consultant to ensure that the participating surgeon will be able to fulfil the requirements of the programme including undertaking the necessary course unit assessments.

Existing consultants may wish to take the Diploma and are encouraged so to do. You will need to identify a colleague to act as supervisor in a similar manner to surgeons who are still in the training grade. The course is then administered in the same way via a series of tutorials and formal assessments for each course unit as previously stated. Previous Fellowship experience in hand surgery will be considered on an individual basis but you will still need to have your supervising colleague undertake the same internal assessment for each course unit. It would be anticipated that existing consultants would have sufficient familiarity with the course content that their assimilation of material would be relatively quick. There would still need to be a 12 month period from registration to sitting of the final exam. Assessed courses at recognised institutions, attended up to 5 years before the date of registration may be considered for the exemption of specific course units/part course units of this Diploma programme subject to Educational Director and UoM approval to a maximum of 30 credits.

1.2.2 Registration

The first step for any surgeon wishing to enrol on the course is to identify and obtain the commitment to participate of an eligible supervising consultant who has a major interest in and clinical practice in hand surgery. The supervising consultant must apply and get approval from the Educational Director having completed a section of the enrolment form. Once approval for the supervising consultant has been agreed the participating surgeon will register with the Course Administrator at the BSSH office (currently Miss Angela Rausch). The enrolment form must be completed and returned along with the necessary course fee payment. Payment may be by cheque or credit card (Appendix 9).
(See also algorithm in section 4.1)

1.2.3 Full-time and part-time study

Participating surgeons must complete the Diploma within 5 years from registration. Consistent with existing Equal Opportunities Policy the course may be taken part-time. Any part-time study will be agreed before starting, or during, the programme and there should be a stated minimum weekly study time allowance. Should the necessity for a break in study arise, participating surgeons are required to apply in writing to the Programme Director to be granted an "out-of-programme" period. "Out-of-programme" periods are only granted in exceptional circumstances. It is the responsibility of the participating surgeon to advise the BSSH Course Administrator of changes of circumstances that affect their status on the course (see also section 4.3 Responsibilities of participating surgeon)

1.2.4 Induction arrangements

A copy of the Programme Handbook will be provided to participating surgeons and their consultant supervisors. In addition the participating surgeon will receive a booklet entitled Record of Coursework and Assessments that specifies the required assessments for each Module. The internal assessments are adapted from those that are widely used in surgical training. Examples of the different types of internal assessment can be viewed via the ISCP web site www.iscp.ac.uk. It is important that both the participating surgeon and the supervising consultant view these, particularly at the outset when this type of format is less familiar to most. At commencement of the course the supervising consultant and participating surgeon should plan to meet and specify a personal development plan (see also section 5.9 Personal Development Planning).
Each participating candidate will be allocated a named Candidate Counsellor who will be available for support and who will be in regular contact with the Candidate throughout their Diploma studies). In addition the Candidate Counsellor will be able to contact the Chair of the Diploma Committee who can answer questions regarding the programme and be a first point of contact if any difficulties arise. The name and email address of the regional mentor will be included in the welcome letter.
Participants are strongly recommended to apply for associate membership of the BSSH. The benefits of this include full text access to the European edition of the Journal of Hand Surgery, which will be invaluable during the course.

1.2.5 Administrative records

The BSSH office will keep a file on each participating surgeon with both paper and electronic copy and will keep an up to date log of accumulated credit points as the course progresses. Details of the file can be obtained on request by the participating surgeon, their consultant supervisor and the administrators of the Diploma. Beyond that the contents of the file are confidential. Electronic data will be kept in compliance with the Data Protection Act and will be entirely confidential from the point of view of non-availability of such data to employing Trusts and professional regulatory bodies.

1.3 Key dates and contacts

The BSSH office can be approached at any time to commence the registration process but the participating surgeon is advised to allow 4-6 weeks to allow processing of the application in time

for registration. There is a specific application form for the BSSH registration process (APPENDIX 9) and copies of this are available from the BSSH office.

- Registrations with the BSSH can be made throughout the year
- Course registration is for 5 years with the option to study part-time.
- The Diploma examination will be held annually.
- Registration for the exam (the eighth module) is made with the BSSH office in January each year by completion of the exam entry form.
- Submission of externally assessed coursework and a completed workbook must be made to the BSSH office by February each year. Entry to the exam will not occur without all the workbook and assignments being successfully completed by this time.

A full list of post-holders and important contacts is included under APPENDIX 1. This list will be subject to change as personnel change over and in any case of difficulty please contact the BSSH office.

1.4 Module work abroad

Candidates may apply for up to three modules to be undertaken in a recognised Hand Unit abroad. A named tutor must be nominated who is familiar with the Diploma process and has read and understood the Handbook details on the BSSH website. Applications for module completion abroad must be made in writing six months ahead of travel to the BSSH office. A supporting letter from the nominated Consultant tutor stating that he/she will comply with the duties of a Consultant tutor is also required and should be received no less than six months before the commencement of a fellowship.

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2. PROGRAMME OUTLINE

2.1 Programme overview

The Hand Diploma will be delivered by distributed learning alongside a comprehensive series of courses both practical and lecture-based. The Diploma carries 120 credits at Higher Education Level where 1 credit equates to 10 hours of study / assessment.

The study course units can be sat in any convenient order but the examination course unit can only be sat at the end of the course.

It is possible for the course to be flexible in terms of timing such that part-time study for all or part of the course is possible within the rules. ***The rules allow a maximum of five years from date of registration to complete the programme.*** In addition courses and conferences that you have attended previously and within 5 years of the registration date may be eligible for Accredited Prior Learning (APL) allowing exemption from up to 30 credits. It is possible to step off the course and step back on within a reasonable period of time although it is expected that the total time to complete the programme would normally be within one year of obtaining a certificate of completion of training years. Individual circumstances will be considered on a case-by-case basis by the Diploma Subcommittee. It is important that you discuss any changes to your status on the programme with your consultant supervisor and with the BSSH office Administrator at an early stage.

The Programme Specification is detailed in Section 2.2. This part of the document summarises the aims and intended learning outcomes of the programme in terms of knowledge, intellectual skills, practical and transferable skills and relates these to the particular teaching methods and assessment instruments. It is a core document of the Diploma programme.

2.2 Programme Specification

2.2.1 General Description

Award	**Programme Title**	**Duration**	**Mode of study**
Postgraduate Diploma	Diploma in Hand Surgery	Equivalent to 12 months full time study	Distributed learning
Postgraduate Diploma	Diploma in Hand Surgery	Equivalent to18 – 24 months of part time study	Distributed learning

School	School of Medicine
Faculty	Medical & Human Sciences
Awarding Institution	University of Manchester
Programme Accreditation	British Society for Surgery of the Hand
Relevant QAA benchmark(s)	N/A

2.2.2 Aims of the Programme

The programme aims to:

01.	Equip the surgeon with the specialist knowledge and range of skills necessary for the practice of hand surgery at the level of the newly appointed Consultant Hand Surgeon
02.	Link and integrate the acquisition of detailed specialist knowledge with the range of practical, technical and professional skills in a way that enhances the care of patients presenting with disorders of the hand
03.	Encourage detailed exploration of the evidence-base for hand surgery practice thus promoting a culture of innovation and scientific enquiry
04.	Provide a model for ongoing integrated learning with appropriate internal and external assessments; elements of which could subsequently be adapted for use in consultant revalidation by the General Medical Council (GMC)
05.	The Programme will effectively define the standard for the practising hand surgeon in the UK allowing the profession to define its own paradigm of specialist education
06.	Promote recognition of Hand Surgery as a postgraduate specialty
07.	Improve the standard of care for disorders of the hand in the United Kingdom

2.2.3. Intended learning outcomes of the programme

A. Knowledge & Understanding

Students will be able to:

A1.	Demonstrate a comprehensive working knowledge of the *principles* of the theoretical and practical basis of hand surgery to include the relevant basic sciences
A2.	Demonstrate a more detailed knowledge of specific areas of hand surgical practice constituting the more common conditions; as designated in the syllabus
A3.	Develop an awareness of the clinical and scientific literature and evidence–base for the practice of hand surgery

Learning & Teaching Processes (to allow students to achieve intended learning outcomes)		**Assessment** (of intended learning outcomes)
Tutorials based at department level (A1-3)		Work place assessments • Knowledge base (A1, A3) Case-based discussion (CbD) (A2)
Attendance at specialist clinics on a supernumary basis (A2)	→	Preparation of one lecture on designated topic (A1-3)
National courses affiliated to the BSSH (A1-3) • practical and skills-based courses • instructional (lecture-based) courses		Course unit 8 – examination following the other 7 course units (A1-3)

B. Intellectual Skills	
Students will be able to:	
B1.	Demonstrate the ability to elicit, synthesise relevant information and plan patient care pathway
B2.	Critically evaluate scientific literature pertinent to the practice of hand surgery
B3.	Demonstrate capacity for higher order thinking and decision making
B4.	Write a review article suitable for publication on a topic of choice in hand surgery
B5.	Demonstrate communication and presentational skills supporting everyday professional practice

Learning & Teaching Processes		**Assessment**
Tutorials based at department level to include reflective learning sessions (B 1-5)		Work place assessment • Knowledge-based assessment (B1-4) • Case-based discussion (CbD) (B1-5) • Clinical evaluation exercise (CEX) (B1, 3)
Supervised outpatient case-assessment and discussion (B1, 3, 5)	→	Develop algorithms for certain complex management problems (B1,3)
National courses affiliated to the BSSH • instructional (lecture-based) courses (B1,2,4)		Course unit 8 – examination following the other 7 course units (B1-4)

C. Practical Skills	
Students will be able to:	
C1.	Acquire competencies relevant to the discipline comprising the planning, counselling and undertaking of procedures to include managing aftercare and potential complications
C2.	Acquire a range of operative skills appropriate to those expected of the newly-appointed consultant

Learning & Teaching Processes	**Assessment**
Supervised operative experience alongside the clinical supervisor and other consultant colleagues (C1,2)	Work place assessment • Direct observation of procedure (operation)(DOP) (C1,2)

Study of demonstration DVDs of named operative procedures as provided with course materials (C1, 2)	→	Prepare and submit operating videos of 'index' operations (C1,2)
National courses affiliated to the BSSH • practical and skills-based courses (C2) • instructional (lecture-based) courses (C1)		Course unit 8 – examination following the other 7 course units (C1,2)

D. Transferable Skills and Personal Qualities **Students will be able to:**	
D1.	Demonstrate presentational skills facilitating communication with patients, colleagues and to larger audiences as appropriate
D2.	Demonstrate the ability to work with, organise and lead the team
D3.	Function as a competent surgeon practising according to Good Clinical Practice guidelines
D4.	Access literature databases and online journal facilities
D5.	Critically evaluate scientific and clinical literature
D6.	Be capable of designing an audit project
D7.	Be capable of designing a research paper

Learning & Teaching Processes		**Assessment**
Work place activity based on the Personal Development Plan and identifying individual projects of interest that will assist in developing the above skills (D1,2,3)		Work place assessment (D1-7) • Knowledge-based assessment • Case-based discussion (CbD) • Clinical evaluation exercise (CEX) • Direct observation of procedure (DOP)
Sessions with Consultant Supervisor to develop the personal portfolio along Good Clinical Practice guidelines (GMC) (D1,2,3,4,5,6,7)	→	RITA assessments for trainees or Annual appraisal for consultants (D1-3)
Participation in local, regional and national scientific meetings (D1,4,5,6, 7)		Submit review article suitable for publication on topic of choice (D5, 6, 7)

2.2.4 Structure of the programme

Course unit No	Subject	External Courses (credit points)	Departmental Tutorials	Private Study / Clinical work	**Credit Points for course unit**
1	Basic sciences pertinent to the upper limb / Rehabilitation	2 (20 hrs)	1 (10 hrs)	12 (120 hrs)	**15**
2	Skin & soft tissues / Dupuytren's contracture	2 (20 hrs)	1 (10 hrs)	12 (120 hrs)	**15**
3	Fractures and joint injuries of the hand and wrist including wrist instability	2 (20 hrs)	1 (10 hrs)	12 (120 hrs)	**15**
4	Osteoarthritic and inflammatory disorders of the hand and wrist	2 (20 hrs)	1 (10 hrs)	12 (120 hrs)	**15**
5	Tendon disorders	2 (20 hrs)	1 (10 hrs)	12 (120 hrs)	**15**
6	The Child's Hand / Tumours / Vascular disorders	2 (20 hrs)	1 (10 hrs)	12 (120 hrs)	**15**
7	Nerve disorders	2 (20 hrs)	1 (10 hrs)	12 (120 hrs)	**15**
8	- Application of Practical Skills - Assessment by Examination			14 (140 hrs) 1 (10 hrs)	**15**
					120

Course Unit 1-7 may be taken in any order but Unit 8, which includes the over-arching assessment, can only be taken following completion of units 1-7. All units are compulsory
One credit equates to 10 hours of study

2.2.5 Student induction, support and development

Existing Trust-based induction programmes at commencement of clinical post.

Participating surgeons and consultant supervisors resource packs to be distributed at commencement of course.

System of Course unit Leaders / Advisors to back up the internally taught courses and support the consultant supervisors as issues and questions arise.

Further details are available in the *Operations Manual* and this *Programme Handbook*.

2.2.6 Curriculum map of course units (modules) against intended learning outcomes of the programme

Course Unit Title and Code (including dissertations and other programme components)	**Knowledge & Understanding**	**Intellectual Skills**	**Practical Skills**	**Transferable Skills & Personal Qualities**

Code	Course Unit title	C/O	A1	A2	A3	B1	B2	B3	B4	B5	C1	C2	D1	D2	D3	D4	D5	D6	D7
1	Basic sciences pertinent to the upper limb and rehabilitation - *prepare and give departmental lecture on rehabilitation topic*	C	DA	DA	DA	-	DA	-	-	- A	-	-	A	-	D	D	D	-	-
2	Skin & soft tissues / Dupuytren's contracture - *submit video demonstrating operation for listed procedures*	C	DA	DA	DA	DA	DA	DA	-	DA	DA	DA A	D A	D A	D A	D A	D A	-	-
3	Fractures and joint injuries of the hand & wrist Wrist instability - *submit algorithm of clinical management problem pertinent to course unit*	C	DA DA	DA -	DA	DA DA -	DA DA A	DA DA A	- - -	DA DA -	DA	DA	D A	D A	D A	D A	D A	-	-
4	Osteoarthritic and inflammatory disorders of the hand and wrist	C	DA	DA	DA	DA	DA	DA	-	DA	DA	DA	D A	D A	D A	D A	D A	-	A
5	Tendon disorders -*prepare review article on topic choice*	C	DA	DA	DA	DA	DA	DA	- A	DA	DA	DA	D A	D A	D A	D A	D A	-	-
6	The Child's Hand / Tumours / Vascular disorders	C	DA	-	-	DA	DA	DA	-	DA	DA	DA	D A	D A	D A	D A	D A	A	-
7	Nerve disorders - *prepare critique of papers from a scientific conference*	C	DA	DA	DA	DA	DA	DA	-	DA	DA -	DA -	D A	D A	D A	D A	D A	-	-
8	Theory and practical skills assessment	C	A	A	A	A	A	A	-	A	A	-	A	-	-	-	A	-	-

<u>Legend for cells:</u> D = intended learning outcomes of the programme are taught or developed within this course unit
A = intended learning outcomes of the programme are assessed in this course unit
C= compulsory course unit

2.2.7 Eligibility criteria

Candidates must be able to satisfy the general admissions criteria of the University and of the School in the following ways:

- Candidate should be a practising surgeon with a qualification that is registered with the GMC

  and
- Candidate should be in a recognized specialty training programme in Plastic or Orthopaedic Surgery and be within 18 months of taking the FRCS(Orth/Plast) exam. The candidate must seek approval from their programme director. The candidate is required to have passed the Intercollegiate Specialty examination in either orthopaedic or plastic surgery (FRCS(Orth) or FRCS(Plast)) before they can complete the Diploma, by taking the examination (module 8).

  and
- Candidate for the examination module will be undertaking or have undertaken 6 months in advanced hand surgery training in the United Kingdom (following successful completion of Intercollegiate Specialty examination in either orthopaedic or plastic surgery (FRCS(Orth) or FRCS(Plast)) or an equivalent approved overseas Hand Fellowship. The requirement is that the candidate must complete the full six months to be eligible to receive the Diploma irrespective of completion of the modules other than in exceptional circumstances.

2.3 Definition of required standard

The Hand Diploma programme aims to equip you with the skills expected of the specialist Hand Surgeon on their first day in independent practice.

The course is designed to encourage the development and application of higher order thinking in your practice of hand surgery. It is helpful to think of the elements of learning as fitting together in a hierarchical fashion:

Level 1: *Knowledge*
The ability to recall a range of facts and experiences both specific and generalised.
Level 2: *Understanding*
The ability to comprehend the meaning of acquired knowledge and to interpret, translate and extrapolate from this.
Level 3: *Application*
The ability to apply knowledge and comprehension in different situation and to infer conclusions from facts
Level 4: *Analysis*
The ability to identify key components and to dissect arguments
Level 5: *Synthesis*

The ability to combine elements and to produce coherent logical conclusions
Level 6: *Evaluation*
The ability to assess, justify, criticise and defend a hypothesis, theory or argument. This is placed at the top of the hierarchy as it requires elements of all the other levels to be carried out successfully.

At Diploma level most learning goes on at Levels 4-6 and in essence comes down to developing the following skills:
Critical appraisal – the ability to analyse complex theories and evaluate both the positive and negative aspects of the component parts
Evaluation - the ability to judge the worth of scientific literature in relation to the findings of critical appraisal
Reflection – the ability to reflect on your own clinical practice and to recognise strengths and weaknesses

These skills are an integral part of the stated learning outcomes for each individual course unit in the programme and are stated as search in the learning materials for each course unit.

You will find full details of what you are expected to achieve in the Programme Specification (Section 2.2) and in the details of individual Course units (Appendix 3) but in general terms you should be able to demonstrate:

- That you have built on your prior knowledge and experience for example from your previous undergraduate and clinical experience
- Ability to deal with complex issues both systematically and creatively and to make sound judgements in the absence of complete data
- Ability to communicate conclusions clearly to specialist and non-specialist audiences
- Ability to work as an independent, reflective practitioner
- That you can work effectively in teams and individually

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3. PROGRAMME RESOURCES AND ASSESSMENTS

Course unit specifications with readings materials are regularly updated and can be downloaded from www.bssh.ac.uk (password protected). The course units are currently detailed in APPENDIX 3.

3.1 Learning resources

Most of you will be well used to self-directed study as a trainee on a recognized programme with the aim of completing FRCS(Orth) or FRCS(Plast). The following advice is respectfully offered:

- Time management skills will be key to your success in this programme and it is important to sit down with your consultant supervisor and identify the times when you can both commit to the tutorial sessions, supervised clinics and supervised operating sessions.
- The programme is easier to undertake when working in a Hand Surgery unit or for a Hand Surgeon. So plan to undertake the practical aspects of the course during this time both prior to and after passing the FRCS (Plast or Orth)
- Aim to spend 12 hours per week in private study – at least some of this time should be scheduled in your formal timetable
- There are specific texts available that will help you to gain the most out of the time you have available for study e.g. Northedge A (1990) The Good Study Guide. Open University, Milton Keynes
- Prepare for tutorials – these are meant to be interactive sessions reflecting an exchange of knowledge and ideas between senior professionals
- Consider making brief summary notes / cards / mindmaps of material you have studied. Pass rates for examinations in general are higher for candidates who assimilate and order their knowledge base.

3.2 Access to scientific and clinical journals

Your local hospital or affiliated local University library should give access to Internet journals stocked by that library via ATHENS. This is a search engine which allows access to full text versions of articles in many key journals. All NHS employees are entitled to free access to ATHENS and your Trust's librarian or educational advisor will help you to set this up and show you how to use the programme. You will be given a username and password and may then access the journals belonging to this facility from any computer linked to the Internet using your password. Many journals nowadays will allow purchase of individual articles for a one-off fee. Alternatively individual articles can be purchased in the traditional way via order made by the interlibrary loans service. Fellows and members of the Royal Colleges of Surgeons also have access to the excellent on line library services of those institutions.

As an associate of the BSSH a surgeon has access to the Journal of Hand Surgery (European) and can make arrangements to access the American edition in addition.

You may find it useful to access medical information sources via the Internet. There are a number of useful websites such as Medscape www.medscape.com or PubMed

www.ncbi.nlm.nih.gov/PubMed/ . These give you access to peer reviewed clinical articles, literature reviews on medical specialties, practice guidelines and news.

It is intended that the participating surgeon will have the library and educational resources of the Trust in which they work. These resources will have been inspected (and judged satisfactory) as part of the rolling programme of 5-yearly inspections of the Interface Committee in Hand Surgery or Specialist Advisory Committees in Plastic or Orthopaedic Surgery. These inspections are conducted under the aegis of the Postgraduate Medical Education Training Body (PMETB) or equivalent regulatory body.

3.3 Marked assignments

All course units are compulsory and the entirety of the subject matter will be assessed in the examination (Course Unit 8). There is room within the syllabus to explore individual areas of interest namely in the submitted coursework as detailed under the individual course units.

3.4 List of practical, instructional and scientific courses/conferences

A comprehensive list of affiliated courses is given in APPENDIX 2. It is not expected that you go on all of these but should plan to attend a number after due discussion with your consultant supervisor. Many of you will already have attended a number of these courses at the time of enrolment and you can claim credits for those you have attended within 5 years of this enrolment date as long as you can produce evidence of your attendance.

3.5 Formal assessments

In general terms, the standard expected is that of the practising hand surgeon on their first day in consultant practice.

Internal assessments

Modules 1-7 include a series of work-place based assessments (WBAs) conducted by the local consultant supervisor and tutors. Standardisation of the marking scheme will be achieved by detailed initial advice including standard marking proforma. Mark sheets are submitted electronically or in hard copy to the BSSH office and kept on the participating surgeon's file. Details of the individual assessment tools namely the knowledge based assessment (KBA), clinical evaluation exercise (CEX), case-based discussion (CbD) and directly observed procedure/operation (DOP) are listed under APPENDIX 5. Specific advice on the conduct and requirements of these assessments can be obtained first from the ISCP web site www.iscp.ac.uk and if there are particular issues arising then the Director of the programme.

For all of the 7 taught Modules, there is a knowledge based assessment (KBA). All the modules will have the requirement to undertake at least one directly observed procedures (DOP) (excluding Module 1), case-based discussions (CbD), and clinical evaluation exercises (CEX). However we believe that in regard to DOPs, CbDs & CEXs that it is in the interest of the candidate to undertake more than the official requirements. The candidate should submit all the assessments undertaken as this gives the examiners a much broader knowledge of an individual candidates work.

This information can then be used to discuss any candidates who may be on the borderline of passing any elements of the Diploma programme including the examination. In addition Module 1 requires the preparation and delivery of a lecture to the department, and Module 7 requires the participant to prepare a critique of papers from any relevant scientific meeting to present within the department.

External assessments
It is important to the validity and reproducibility of this programme that all participants should be marked to the same standard. This is an important part of our quality assurance framework. To this end there are a number of elements in the course units that require external marking. The external assessors are selected UK Hand Surgeons with a thorough knowledge of the Diploma Programme. Specifically, the participant is asked in Module 2 to prepare a DVD of himself/herself undertaking an operation for one of the listed procedures, in Module 3 to develop an algorithm for management of a specified disorder and in Module 5 to prepare a review article on a topic of choice such as would be suitable for publication in the hand surgery literature. The editor of the Journal of Hand Surgery, European edition has advised that work from the Diploma can be submitted for publication after approval from the Education & Training committee. Similarly candidates who are associates of the BSSH can consider submitting their article for the Pulvertaft Prize. Diploma study may incorporate work for a Cochrane review with the approval of the subcommittee.

A Record of Coursework and Assessments book is provided with your induction materials. This is an important document that lists and records all of the assessments on the course. Further details on its completion are detailed in the booklet itself.

3.6 Examination

On successful completion of seven topic-based course units of the course with accumulation of the necessary credits the course participant will be eligible to sit the Hand Diploma examination. The examination forms Module 8, which runs throughout the programme and involves the participating surgeon gaining theoretical knowledge and practical skills relating to hand surgery. The module is assessed by a final examination that must be passed in order for the surgeon to be awarded the Diploma. It is a summative assessment of the entire body of learning and conducted at the standard of what would be expected of the consultant hand surgeon in the first day of consultant practice. There are no optional elements within the examination as this is a professional qualification.

There will be two components of the examination which is sat on consecutive days and consists of a paper of ‘best answer’ multiple choice questions (MCQs) and extended matching questions (EMQs) and then a practical / clinical examination on the subsequent day(s) comprising a series of OSCE-style stations. These stations will have some clinical ‘short’ cases but there will be no ‘long’ cases and no unstructured vivas. Both components of the examination must be passed at the same sitting. There is no cross-compensation or carry-over of marks gained in one section to the other. The examination can be taken again on one further occasion. This examination will be held annually

Consistent with existing conventions of the universities for postgraduate diplomas the pass mark in this examination will be 40%. The MCQ/EMQ paper will be marked as a 40% pass with a correction made for random guess of 20% making the pass mark for the written paper at 60%. There is no negative marking.

The OSCE style questions are marked using specific marking descriptors (Page 83). The scores are 0-4. To pass an individual station you must achieve a score of 62.5% or above. The individual scores for each station are accumulated to create an overall score which must also reach a score of 62.5%.

You will be required to pass 75% of the skill stations. If you fail two or more stations with a score of 30% or less you will fail the examination.

At the end of the examination there will be an examiners' meeting at which the scores for each station will be detailed. The examiners of each station will comment and take into account the standard as noted above in regard to the expectation of a Consultant Hand Surgeon in the first day of practice.

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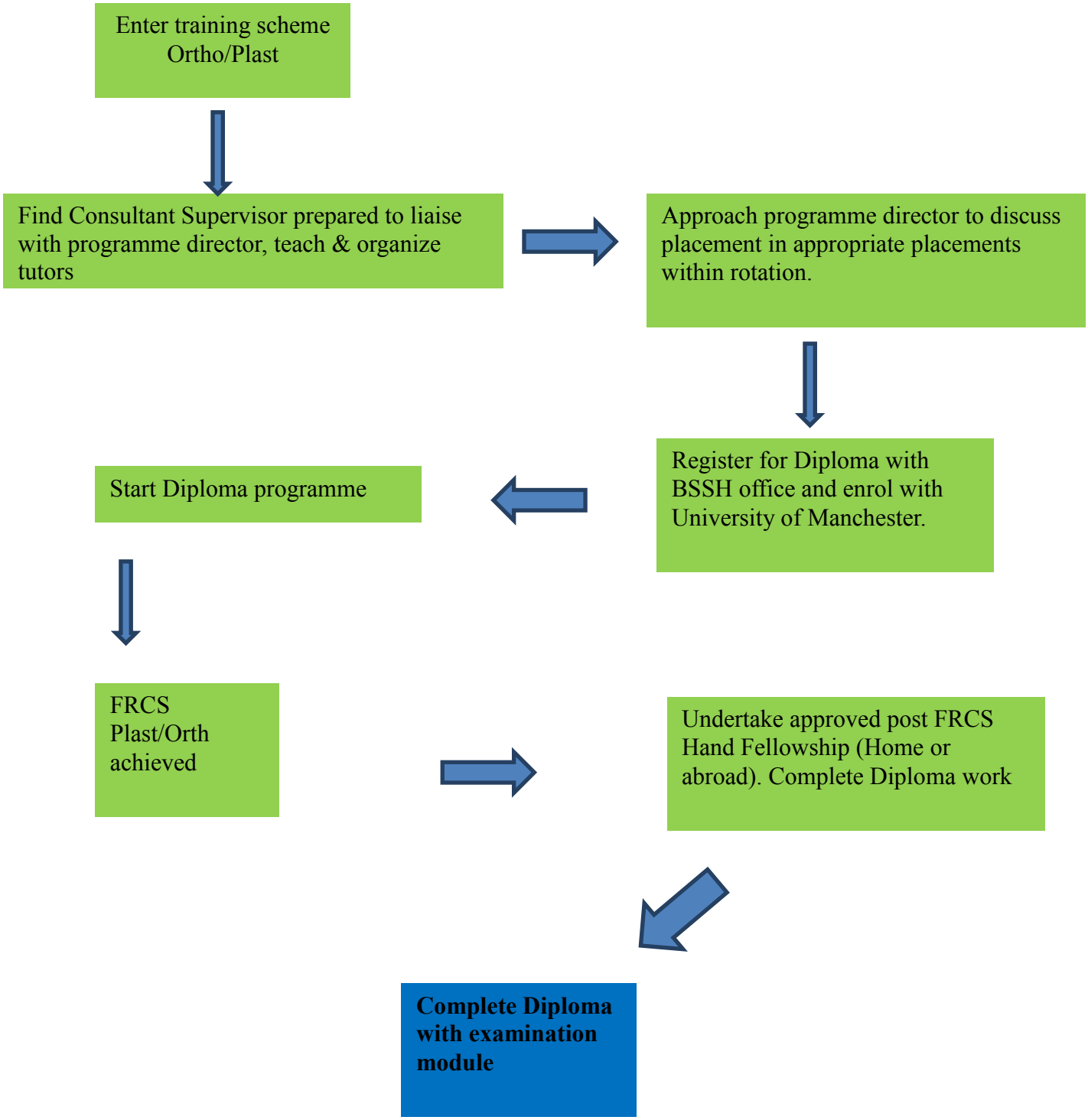
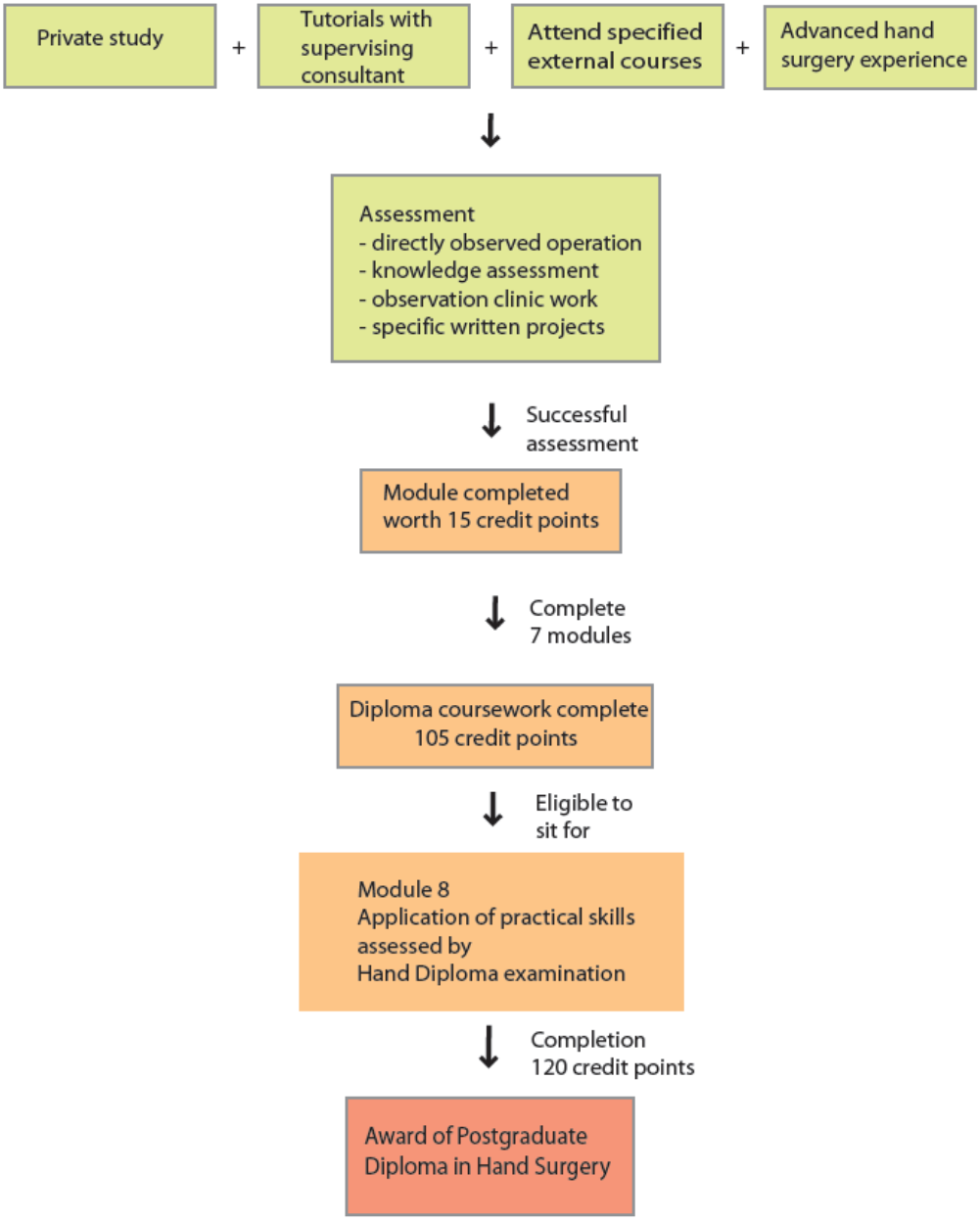
4. PARTICIPANT PROGRESS AND ASSESSMENT

4.1 Registration pathway



4.2 Summary of course structure leading to award of Postgraduate Diploma in Hand Surgery (Dip Hand Surg)



4.3 Responsibilities of participating surgeon

It is your responsibility to ensure that you:

- Have read and understood the structure of the Hand Diploma and rules governing the programme. If there are aspects which are unclear or matters that cannot be dealt with locally then there are advisors to the programme who are happy to be approached for advice (list available from BSSH office)
- Approach and have the express support and commitment of an appropriate Consultant Supervisor and that together you plan your study and weekly timetable to meet the timeline and requirements of the course programme.
- Select tutors, with help from your supervisor, that have the requisite knowledge, commitment and availability to deliver the requirements for each module.
- For some highly specialized topics within a module you may need to seek a tutor outside your area. This should be done in discussion with your supervisor and help can be sought from the BSSH office.
- Schedule a meeting with the Programme Director of your SpR programme to ensure that the Diploma requirement of 6 months of advanced hand surgery training post FRCS(Plast)/(Orth) can be appropriately accommodated, in addition to obtain a placement prior to taking FRCS (Plast/Orth) with a Hand Surgeon or Hand Surgery unit.
- Notify your supervisor of dates of annual and study leave.
- Initiate the workplace based assessments (WBAs) at such time as you feel ready to complete them.
- Ensure that paperwork pertaining to workplace based assessments is completed and returned to the BSSH office
- Mention any problems that you are experiencing at an early stage. You must specifically raise any concerns you have about your progress and request additional support as appropriate.
- Keep written records of all correspondence with your supervisor, including emails and notes of telephone conversations, as well as any more formal arrangements or agreements.

4.4 Policy on plagiarism

A full statement of the policy on plagiarism is given in APPENDIX 6

4.5 The University of Manchester Degree Regulations for Postgraduate Taught Programmes

The Hand Surgery Diploma is validated by The University of Manchester. The UoM degree regulations are available at http://documents.manchester.ac.uk/display.aspx?DocID=13511.

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5. PARTICIPANT SUPPORT AND GUIDANCE

5.1 Consultant supervisors

The consultant supervisor will be a hand surgeon registered for the purpose with the BSSH. The supervisor(s) must be an orthopaedic or plastic surgeon with a major interest and practice in hand surgery. The department must already have been recognised for the teaching of hand surgery at FRCS (Orth/Plast) level and be in possession of a satisfactory review by the relevant SAC / PMETB. Departments that participate in the Diploma programme will be subject to the usual 'rolling' programme of quality assurance inspections that will dovetail with the ongoing Interface Committee in Hand Surgery/PMETB inspection process. For the purpose of registration there must be a named Consultant Supervisor for each registered candidate but it is normal for the tutorial work to be shared between the consultants of a given department or group of departments according to their particular interests.

The consultant supervisor should meet with the participating surgeon on a regular basis to hold tutorials relevant to the course unit of current study. There needs to be prior clear agreement on the frequency, length and nature of face-to-face meetings and other contacts. A brief record should be made in the Coursework booklet by the supervisor and filed to the Programme Administrator confirming the content of each tutorial. Credit points will be allocated on successful return of these forms. It is important that both supervisor and participant keep their own copy of these forms and it is ultimately the responsibility of the participant to ensure these are returned expeditiously. In addition it is important that both parties should keep copies of all correspondence and keep copies of key areas covered in tutorials and meetings.

It is recognised that there may be some sections of the syllabus which are not part of the Consultant Supervisor's day to day practice. It is anticipated that tutorials would be arranged between two or more colleagues in a given department and that both plastic and orthopaedic departments are likely to need to call on their opposite numbers to deliver the whole of the programme. Thought needs to be given at the outset as to how this can be made to work within a given region and firm commitments made by those individuals who choose to involve themselves.

The Consultant Supervisor should ensure that any tutors who teach on the programme have the knowledge and expertise to deliver a level of education required for the Diploma. It is expected that some departments will not be able to provide tutorials in certain specialized subjects such as congenital hand surgery and brachial plexus surgery. The Consultant Supervisor may be able to arrange tutorials with appropriate tutors however on occasion this may not be possible in which case the BSSH office may be able to help through the Diploma Subcommittee to put the participant in touch with an appropriate person or department to arrange these tutorials.

Availability of the consultant supervisor and tutors is key to making this distributed learning programme effective. It is recommended that any consultant thinking of taking on such a role should have this formally incorporated into and recognised on their job plan. There needs to be a period of time devoted to the tutorials or internal assessments. Tutorial time needs to be protected and free of competing duties.

The consultant supervisor will meet or communicate with their participating surgeon on a regular basis excepting holidays, study leave etc. Each course unit of the course will be delivered 'in house' within the department in which the trainee and their consultant are working. The

participant and tutor meeting will typically consist of a tutorial to discuss and develop knowledge and understanding of material that has been read in preparation. *For each course unit there should be 4 tutorials covering the range of the course material.* This corresponds to 28 tutorials to be arranged over the Diploma programme. Time spent on internal assessments is over and above that allocated to the tutorials. The named supervisor should not personally deliver each and every tutorial on the course but is ultimately responsible for making sure that between the consultant colleagues of a department that the course has been delivered in the specified format. The participating student should have access to their supervisor by e-mail and by phone at all times except when the supervisor is on leave.

A system of advisors has been put in place to support those who are participating in the Hand Diploma. These surgeons are happy to advise on any aspect of the programme and their names are available from the BSSH office and from the outset the participant and Consultant supervisor will be allocated a named advisor. For those new to the course there may be value at the outset of the programme in a 3 way discussion between the participating surgeon, consultant supervisor and Diploma advisor – for the purpose of clarifying the conduct and structure of the programme. Supervisors may benefit from familiarisation with the content of UoM Supervisor Awareness and Equal Opportunities courses although most will have already undertaken equivalent courses as part of their NHS duties.

Supervisors will also be supported by provision of written materials that will detail what is required in terms of course content, appraisal and internal assessments

Responsibilities of the consultant supervisor and tutors:
The consultant supervisor and other tutors should:

- Have read the tutors guide which is to be supplied by the Consultant supervisor and available from the BSSH office
- Be available, constructive and supportive
- Try to identify what has been done well in addition to what needs improving
- Have appropriate expertise and experience in the practice of hand surgery
- Be widely read with current knowledge of relevant research and clinical trends
- Advise participating surgeon of their leave periods so that tutorials can be planned appropriately
- Advise on realistic timelines – don't leave it all to the end of the attachment on the hand surgery firm
- Act as a mentor figure aiming to support, educate and motivate the participating surgeon in pursuit of the Diploma programme
- Be prepared to advise the BSSH Diploma Counsellor of any important difficulties being encountered either in the performance of the participating surgeon or delivery of the programme

5.2 Participating surgeon feedback

The Programme organisers are keen to receive constructive feedback and will seek both formal and informal feedback from each course participant during and at the conclusion of their programme as detailed under APPENDIX 5. The Hand Diploma as originally conceived will evolve and adapt to take into account this type of feedback and incorporate educational developments as detailed by PMETB or other training bodies.

5.3 Participating surgeon representation

Trainee representatives sit on the Education & Training Committee of the British Society for Surgery of the Hand. The current representatives contact details are available from the BSSH Office Administrator and these individuals may be approached concerning issues of wider relevance. The trainee representatives are not in a position to represent course participants in respect of individual problems or complaints and such problems should be channelled as advised under Section 5.5.

5.4 Withdrawing from the programme

Notification of withdrawal from the programme should be made to the Administrative Officer at the BSSH office. There will not normally be any refund of fees paid except in the instance where a formal complaint or appeal has been made and that complaint or appeal has been upheld after due process of investigation. Disinclination to continue the Programme because of inability to keep up with the course work will not constitute grounds for refund of fees.

5.5 Appeals and complaints

There is a formal process for complaints and appeals although it is intended that the majority of issues arising will be resolved informally. Details are given in APPENDIX 8.

5.6 Equal opportunities policy

See APPENDIX 7.

5.7 Occupational Health Policy

Policy is that of the Occupational Health department of the Trust in which you work. Any issues pertaining to health matters should be directed in the first instance to Occupational Health. It is the participating surgeon's responsibility to notify the course administrator of any condition which is likely to impact on his or her ability to complete the course within schedule.

5.8 Disability and special needs support

Advice for individuals with a disability in postgraduate medical education can be found at: http://www.gmc-uk.org/education/undergraduate/15_postgraduate_training.asp.

If you need to discuss any further requirements, please contact the Programme Director.

5.9 Personal development planning

At the beginning of the course it is required that you sit down with your consultant supervisor and together plan the time-course of the programme along with provisional dates by which you intend to undertake the respective assessments. This should then serve as an indicator if you start to fall behind and required additional time or other help. It is helpful if you can review your progress on a regular basis with your supervisor.

You should aim to keep an up to date operating logbook to inform your appraisal process. Although surgical skills are assessed as part of the Hand Diploma it is not the current intention to have you complete a checklist of different operations or competencies. It will be for you to

decide which operations you wish to demonstrate as part of your internal assessments and you will initiate that process in consultation with your supervisor or tutor.

In addition you should provide copies of your regular interval appraisals and RITA assessments as these occur. It is good practice to make and maintain an organised portfolio with your essential documentation easily to hand.

5.10 Fees

The fee for the Hand Diploma will be kept to the lowest level possible by significant and generous subsidy, courtesy of the BSSH. The exact fee will be available on application to the BSSH office. The fee covers the costs of enrolment and quality assurance procedures of the University, course materials as provided from the BSSH and the cost of sitting the Examination (Module 8). It will cover the costs of resitting the Examination on one occasion if needed. It will include the award of the Diploma Certificate by the University. The fee does not cover the costs of attending the various courses and conferences linked to the Diploma. The BSSH Council have agreed that as part of the cost participating surgeons could apply for a refund of the registration fee for one Instructional Course and one Scientific Meeting after completion of the programme.

The Consultant Supervisors and tutors are not remunerated for their important contribution but participation will be acknowledged in their job plan as part of their teaching activities.

You are required to pay the course fee in advance of commencing your studies and should normally be sent with your completed application form. Copies of this form are available from the BSSH office and a specimen form is shown in Appendix 9.

Once payment is received we will give you a password that gives you access to the BSSH web site from where relevant learning materials can be downloaded and written and audiovisual materials needed for the course will be forwarded to you.

At the time of launch the BSSH has made a major financial commitment to underwrite and subsidise the true costs of running the Hand Diploma and the package as offered is, we feel, highly advantageous to the participating surgeon.

5.11 Sources of financial help

You may be able to obtain financial help from your Postgraduate Dean (trainees), NHS Trust (consultants).

5.12 Notification of change of address

We will need to contact you at various times during the programme and we therefore need to have your current details on file. If you do change work, home or email address, please let the Programme Administrator know as soon as possible (contact details are given in Section 1.3)

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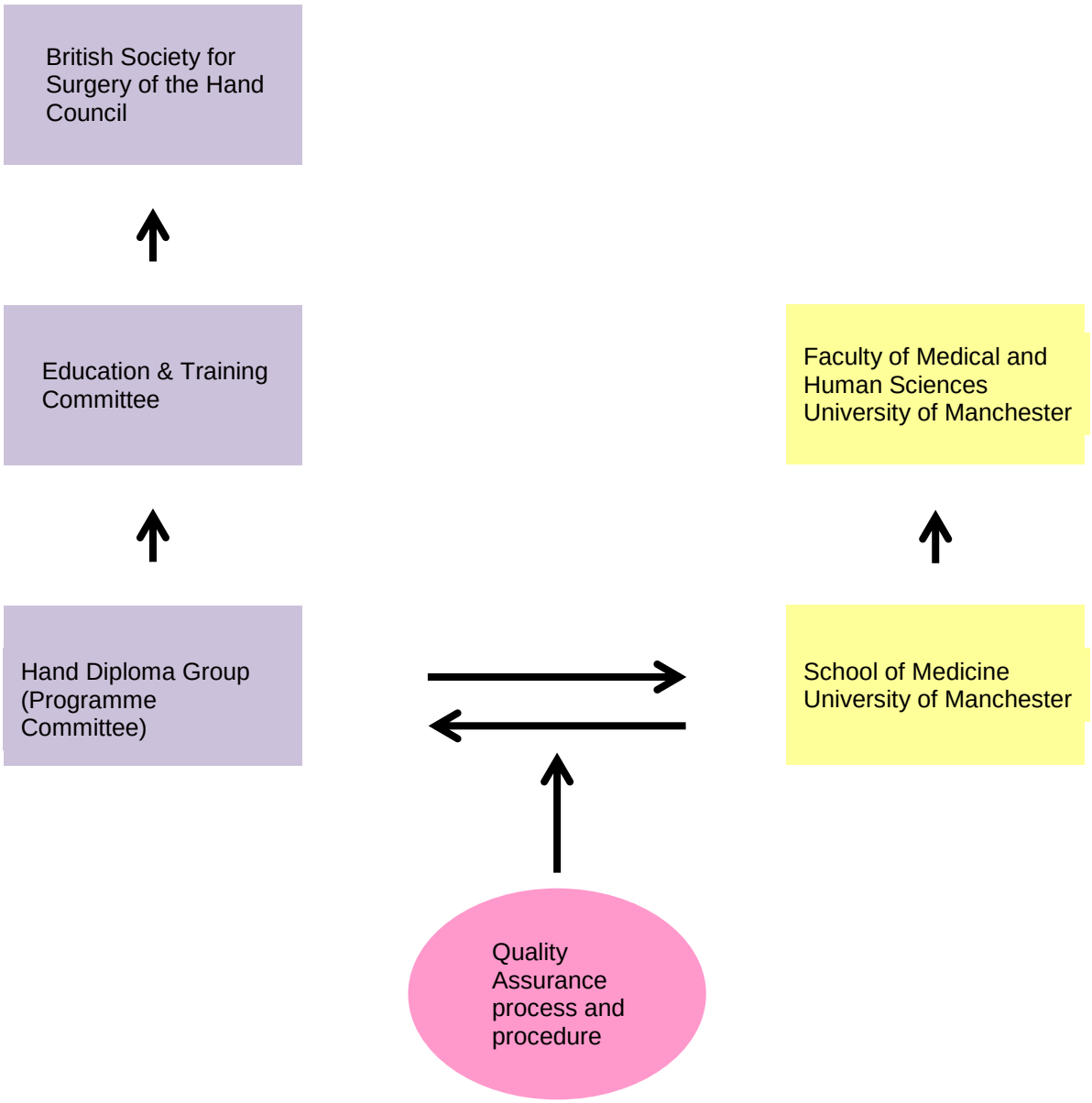
6. PROGRAMME MANAGEMENT

6.1 Role of the Hand Diploma Subcommittee

The Hand Diploma Subcommittee meets on a regular basis to advise on all aspects of the programme and to make recommendations for the consideration of the Education & Training Committee of the BSSH. The Education & Training Committee in turn reports to and advises the BSSH Council. Individual members of the Hand Diploma Subcommittee (current or previous) will have a mentoring role to the participants and supervising consultants on a named and allocated basis. In this capacity they will act as a point of contact for any queries pertaining to the conduct and implementation of the programme.



APPENDIX 1
Key Contacts of the programme

Programme Director

Current: Miss Meg Birks

Contact details: Through BSSH Office

- Chairs Hand Diploma subcommittee
- Member of Board of Examiners
- Lead on convening and co-ordinating examination
- Member of Education & Training Committee (liaison with its Chairman)
- First point of contact for all enquiries not otherwise delegated
- Keeps the examination bank questions under secure conditions
- Represents the BSSH on the School of Medicine Postgraduate Committee and acts as primary point of contact for the University

Hand Diploma Subcommittee

Current:

Miss Meg Birks (Chair)

Mr Mike Waldram (Internal Advisor to the programme)

Mr Charles Pailthorpe

Mr Carlos Heras-Palou

Mr Rajive Jose

Mr Andy Logan

Miss Jill Arrowsmith

Mr Manu Sood

Mr Dan Brown (Chair of Education & Training Committee)

Contact details: Through BSSH Office

Members have convened 4-6 times per year since 2003 and:

- Develop policy for discussion and approval at BSSH Council
- Develop and update syllabus and course units on a rolling basis
- Write MCQs & EMQs for the examination bank

- Submit minutes of meetings to School of Medicine Postgraduate Committee as part of Quality Assurance process

BSSH Course Administrator

Current: Miss Angela Rausch (BSSH office)

Contact details:

Miss A Rausch
Senior Course Administrator
British Society for Surgery of the Hand
Royal College of Surgeons of England
35-43 Lincoln's Inn Fields
London WC2A 3PE
Tel: 0207 831 5162
Fax: 0207 8314041
email: angela.rausch@bssh.ac.uk

- Day to day administration of all items pertaining to individual participating surgeons
- Handles initial and subsequent contacts with participating surgeons and their consultant supervisors
- Ensures all electronic, written and audiovisual materials pertaining to the coursework are distributed in an efficient manner. Provision of information on national courses.
- Maintains confidential file on each participating surgeon
- Receives and collates on-line returns pertaining to individual internal assessments
- Keeps record and confirms in writing completion of each course unit
- Provides logistic support for conducting the examination

Graduate Office Administrator University of Manchester

Current: Ms Wendy Gregson

Contact details:

Mrs Wendy Gregson
Senior PGT Administrator (Recruitment and Admissions and Student Experience Administrator)
School of Medicine – Clinical Alliance
Room 1.94
1st Floor, Simon Building
University of Manchester
Brunswick Street
Manchester M13 9PL
Tel: 0161 306 7972
Email: wendy.gregson@manchester.ac.uk

- Liaises with BSSH Course Administrator

- Responsible for maintaining University's record of registered and completed students.
- Co-ordinates with other University departments regarding diploma certification

BSSH

President

Current: (2015) Prof Vivien Lees

Contact details: Through BSSH Office

- The President will advise on and oversee strategic decisions pertaining to the Hand Diploma (member of Education & Training Committee)
- Chairs BSSH Council meetings in which matters of principle pertaining to the Hand Diploma will be discussed
- Communicates with the membership on matters pertaining to the Hand Diploma

Treasurer

Current: Miss Sue Fullilove

Contact details: Through BSSH Office

- Oversees the financial case for the Hand Diploma
- Assists in financial negotiations with UoM
- Advises on fee structure

Chairman of Education & Training

Current: Mr Daniel Brown

Contact details: Through BSSH office

- Chairs the Education & Training Committee to which the Hand Diploma Subcommittee report
- Liaises with the Hand Diploma lead (where different person)
- Leads discussion on development of the Hand Diploma within the BSSH
- Communicates with BSSH membership and with trainee representatives regarding the Diploma

Chairman of the Instructional Courses

Current: Mr Jonathan Hobby

Contact details: Through BSSH office

- Convenes and organises the international instructional courses around which the Diploma programme is based
- Liaises with the Chairman of Education & Training Committee who is also member of the Faculty of the Instructional Courses
- Provides reports on the courses as required by the QA framework

UoM

Academic Advisor to the Programme

Current: Dr Adam Reid

Contact details: Through BSSH Office

- Committee member of the University School liaising between University and BSSH representatives
- Represents University on Examinations Board

External Advisor to the Programme

Current: Professor Paul MacArthur

Contact details: Through BSSH Office

- Reviews the written submissions made by BSSH to the UoM with comments on feasibility and advisability provided to the UoM.

Board of Examiners

Composition:

Chairman of the Diploma Examiners (Internal Advisor to the Programme & Chair)
Representative of Manchester University
Chairman of the BSSH Education and Training Committee
Hand Diploma Programme Director
Chairman of the BSSH Instructional Courses
Chairman of the Interface Committee in Hand Surgery
External Examiner
Course Administrator (providing minutes)

External examiner

Current: Mr Peter Burge

Contact details: Through BSSH office

- Advises on matters pertaining to reproducibility and validity of the internal 'in-house' assessments
- Advises on matters pertaining to the external Examination to be held yearly
- Reports to Manchester University yearly on standards and conduct of the examination process

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APPENDIX 2
List of courses affiliated to the BSSH and recognised for credits in the Diploma Course

One credit points on the Diploma programme equates to approximately 10 hours of study. These are not the same as the CME points that you are used to gaining. Diploma credit points have been allocated as follows with the CME rating in brackets. Where 2 rather than 1 points have been allocated this reflects the additional preparation and reflection time you will spend as a result of participating in this particular course i.e. there is greater weighting towards the core instructional course series and the practical courses. You should take the opportunity to attend other courses according to your interests within the subject. You should aim to acquire at least 14 points on these courses. These credits are flexible between modules.

Core Lecture Courses

Instructional Courses in Hand Surgery

Series of 6 two day courses running over 3 years covering 12 course units

- *Skin and soft tissue, infection, Dupuytren's disease*
- *Tendon injury, paralysis, rehabilitation*
- *Nerve injury, compression and pain*
- *Fractures, joint injuries, arthritis*
- *Tumors, the child's hand*
- *Wrist, occupational & medicolegal aspects*

3 credits each

Scientific Meetings

BSSH autumn and spring meetings	2 credits
FESSH meeting	2 credits
IFSSH meeting	2 credits
ASSH meeting	2 credits

Practical skill acquisition courses

Anatomy of the Hand and Upper limb, Glasgow	2 credits
AO Hand fracture course	2 credits
AO Wrist fracture course	2 credits
Fracture fixation Course, Derby	2 credits
Leicester Fracture fixation Course	2 credits
Core Skills in Hand Surgery, RCS, London:	2 credits
Advanced Skills in Hand Surgery, RCS, London:	2 credits
Microsurgery courses (various)	2 credits
Basic Practical Hand Course, Dundee	2 credits

Other courses run by BSSH members which may be of interest

Wrightington Hospital programme (various day courses)	1 credit
Derby Hand Club meeting	1 credit
Wrist course, Leeds	1 credit
Derby Wrist Course, November	1 credit
Advanced Course in Hand Surgery, Derby: May	2 credits

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APPENDIX 3
Details of course units

Title	**1. Basic Sciences pertinent to the upper limb / Principles of Rehabilitation**
Course Unit Leader	Mr M.A. Waldram
Credit Rating	15 credits
Aims	To provide working knowledge of relevant basic sciences pertinent to the practice of hand surgery To give a sufficient understanding of the principles and practice of physiotherapy, occupational therapy and splintage for hand and upper limb conditions, to promote the appropriate use of therapy for patients, and a good liaison with therapists.
Intended Learning Outcomes	The ability to demonstrate a working knowledge of: • anatomical structures and relationships, including interpretation of MRI/CT scans • embryology of the upper limb and derivation of common anomalies and variations • musculoskeletal tissue repair and regeneration To be fully acquainted with the rehabilitation needs of patients undergoing hand and upper limb surgery. To understand the modalities of treatment used by physiotherapists in this specialty, and how to make appropriate referrals. To recognise the need for splintage and be able to liaise appropriately with occupational therapists. To understand the principles and practical application of post-operative plaster immobilisation. Understanding of the use of local anaesthesia in Hand Surgery. To understand the needs of patients regarding return to work, both in terms of advising on the appropriateness of employment, and helping with preparation for return to work. To know how to advise patients appropriately on driving safely. To understand the place of prosthetic limb replacement in limb deficiency or loss, and current technical possibilities, including osteointegration. To understand the implications of the Wolfe report on medicolegal reporting, and the principles underlying medicolegal work. To be familiar with the ethical requirements of confidentiality, consent and research.
Unit Outline	Embryology - principles of development and genesis of congenital difference Anatomy - all aspects of anatomy of the upper limb

	(excluding detailed anatomy of elbow and shoulder joints, but including brachial plexus and thoracic outlet) Physiology - the pattern of blood supply to skin, fascia, muscle, bone and tendon healing Pathology - musculoskeletal tumours; repair and regeneration of skin, nerve, tendon and bone Modalities of assessment, modalities of therapy for the injured and operated hand, rehabilitation of flexor and extensor tendon injuries, complex injuries, principles of splinting, work assessment, return to driving Prosthetics Preparation of personal injury and occupational reports Ethical issues (e.g. hand transplantation, research)
Teaching and Learning Methods Suggested supporting visits to/tutorials with: • Hand therapy department and two sessions with a band seven occupational therapist; • Consultant musculo-skeletal radiologist; • Plaster room technician; • Regional prosthetist • Consultant bone tumour surgeon • A hand surgeon who prepares medicolegal reports	Private study Tutorials with departmental tutor Instructional Courses in Hand Surgery (aspects of basic science covered throughout the lecture series) Courses 2 and Course 6 in particular for rehabilitation Windsor Hand Anatomy Course – (Anatomy of the Hand and Upper limb, Glasgow) Schedule attendance at Therapy Clinics and with departmental therapists
Suggested tutorial structure: 1. Embryology, genetics, congenital terms. Development and repair of skin, fascia, muscle and tendon and bone. Anatomy of skin 2. Types of splintage, rehab regimens and patient compliance. Scar contracture, role of post op splinting, application of plasters. Local anaesthesia 3. Anatomy of three main nerves (from brachial plexus to the finger tips), of the upper arm and forearm vascular tree, of the antecubital fossa and forearm muscle nerve supply 4. MRI, CT Ultrasound. Prosthetics. Oseointegration. Tumours and staging. Medicolegal. Ethics and types of research	Indications for physiotherapy Methods used in physical therapy Indications for splintage Types of splintage and methods of construction Advise to patients on return to work Occupational reporting Preparation of medicolegal reports Medical negligence reporting Prosthetic fingers and limbs Return to driving Ethics of confidentiality and research

Assessment Methods	Work place assessment • Knowledge based assessment (KBA) • Case based discussion (CbD) Prepare and give a teaching lecture on rehabilitation topic to the department [Hand Diploma examination]
Reading List	See attached

Reading List / Resource Materials

Embryology/Anatomy

1. Al-Qattan M, Scott H Kozin. Update on embryology of the upper limb. JHS (A) 2013, 38A: 1835-1844.

Pathology

2. Boyer MI. Tendon Healing. Hand Clinics 2005, 21(2): 159-166.

Rehabilitation

3. Cyr LM, Ross RG. How controlled stress affects healing of tissues, J. Hand Therapy 1998, 11: 125-130.

4. Jones L. Scar management in hand therapy – is our practice evidence-based? British Journal of Hand Therapy 2005, 10: 40.

5. Plaster of Paris Technique. A Handbook for Students (Gypsona) supplied by Smith and Nephew.

Medicolegal

6. The expert Witness in Court: A practical guide. Catherine Bond, Mark Solon, Penny Harper Shaw and Sons Ltd 2nd Ed, 1999.
7. Guidance for instruction of experts to give evidence in civil claims. Civil justice Council, 2012 http://www.judiciary.gov.uk

Imaging

8. MRI, Ultrasound and CT Imaging of the Hand and Wrist: Techniques and applications. Edited by Mark A. Davies, Andrew J. Grainger, Steven J. James. Springer 2013. CT, MRI and Ultrasound p37-80.

Prostheses

9. Atlas of Limb Prosthetics: Surgical, Prosthetic, and Rehabilitation Principles: Partial Hand Amputation. John Michael - Chapter 7B Prosthetic and Orthotic Management, p217-225 and Jean Pillet, Evelyn J Mackin - Chapter 7C Aesthetic Restoration, p227-235.

Research

10. Hartung DM, Touchette D. Overview of clinical research design. Am J Health-Syst Pharm. 2009, 66: 398-408.

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Title	**2. Skin and Soft Tissues / Dupuytren's Disease**
Course unit Leader	Mr Rajive Jose
Credit Rating	15 credits
Aims	To understand blood supply of skin and soft tissues, wound healing, reconstruction of soft tissue deficits. Acquire detailed understanding of all aspects of Dupuytren's disease including knowledge of relevant literature.
Intended Learning Outcomes	Ability to demonstrate working knowledge of: • Pathophysiology of wound healing in soft tissues, including burns injury • Demonstrate clear understanding of management of soft tissue injury / deficiency including appropriate use of wound dressings • Understand the reconstructive 'ladder'- to include use of split and full thickness grafts including local, regional, distant and free flaps • Demonstrate ability to manage soft tissue/bony infections • Principles of microvascular surgery including replantations Develop familiarity with basic sciences of pathophysiology of Dupuytren's disease including relevant literature Demonstrate ability to manage Dupuytren's disease
Unit Outline	Wound healing • Primary intention healing, secondary intention healing, healing by epithelialisation Soft tissue and bony infection in the upper limb • Paronychia, felon and deep infections in the hand • Flexor sheath infections • Osteomyelitis • Atypical infections including TB Principles of soft tissue management including reconstruction • Principles of wound debridement and management of infections • Reconstructive ladder • Reconstructive triangle • Soft tissue cover for defects over • Finger tips • Palmar defects in the hand • Dorsal defects including composite tissue loss • Forearm and elbow defects Mangled extremities Burn injuries

	ReplantationsPathophysiology of Dupuytren's disease Clinical assessment of Dupuytren's disease Treatment options for Dupuytren's disease
Teaching and Learning Methods	Private study Tutorials with departmental tutor Attendance at Plastic Surgery departmental Dressing/Therapy Clinics Basic and Advanced Hand Skills Courses Royal College of Surgeons of England Instructional Course in Hand Surgery – Course 1 Skin and soft tissue, Infection, Dupuytren's Disease Optional attendance at a flap course Microsurgery course Northwick Park course Canniesburn course
Content Suggested Tutorial topics 1. **Wound healing, blood supply of skin and muscles and the basis of flap anatomy** ▪ Wound healing, stages and problems in wound healing ▪ Blood supply to skin and muscles ▪ Classification of skin and muscle flaps 2. **Wound management including soft tissue and bony infections** ▪ Primary wound management including debridement ▪ Management of soft tissue and bony infections. 3. **Principles of soft tissue reconstruction of upper limb defects including skin grafts and flaps** ▪ Reconstructive ladder and triangle ▪ Skin grafts ▪ Local, regional, distant and free flaps ▪ Replantations and free tissue transfers ▪ Burn injuries ▪ Mangled extremities 4. **Dupuytren's disease including the current literature** ▪ Anatomy of palmar fascia and Pathophysiology of Dupuytren's disease ▪ Aetiology and risk factors of Dupuytren's disease ▪	Skin & soft tissues - Blood supply to skin and soft tissues- - Wound healing - Reconstructive ladder - Skin grafts - Local and distant flaps - Microsurgical free tissue transfer - Coverage of specific soft tissue deficits - Management of complex wounds - Infections Dupuytren's contracture - Aetiology and risk factors - Pathogenesis including details of scientific investigation undertaken to elucidate Dupuytren's disease - Clinical assessment and patterns of disease Management options - Conservative - Fasciotomy - Selective / limited / segmental fasciectomies - Dermofasciectomy - Preoperative distraction techniques - Management of contracted PIPJ

▪ Clinical assessment of Dupuytren's disease ▪ Management of Dupuytren's disease	
Assessment Methods	Work place based assessments • Knowledge based assessment • Clinical evaluation exercise (CEX) • Direct observation of procedure (DOPS) (Skin / soft tissue) • Submit a DVD of operation performed from the list provided (See Appendix 10) [Diploma examination]
Reading List	See attached

Reading List / Resource Materials

1. Taylor GI, Palmer JH. The vascular territories (angiosomes) of the body: experimental study and clinical applications. British Journal of Plastic Surgery 1987, 40(2): 113-141.

2. Watt AJ, Friedrich JB, Huang JI. Advances in treating skin defects of the hand: skin substitutes and negative-pressure wound therapy. Hand Clin. 2012, 28(4): 519-28.

3. Gupta A, Shatford RA, Wolff TW et al. Treatment of severely injured upper extremity. Journal of Bone and Joint Surgery1999, 81A: 1628-1651.

4. Friedrich JB, Katolik LI, Vedder NB. Soft tissue reconstruction of the hand. J Hand Surg Am. 2009, 34(6): 1148-55.

5. McDonald LS, Bavaro MF, Hofmeister EP, Kroonen LT. Hand infections. J Hand Surg Am. 2011, 36(8): 1403-12.

6. Tsai E, Failla JM. Hand infections in the trauma patient. Hand Clin. 1999, 15(2): 373-86.

Dupuytren's Disease

7. McFarlane RM. Pattern of the diseased fascia in the fingers in Dupuytren's contracture. Plastic and Reconstructive Surgery 1974, 54: 31.

8. Tonkin MA, Burke FD & Varian JPW. Dupuytren's contracture: A Comparative study of fasciectomy & dermofasciectomy in one hundred patients. Journal of Hand Surgery 1984, 9B: 156-162.

9. Jerosch-Herold C, Shepstone L, Chojnowski AJ, Larson D, Barrett E, Vaughan SP. Night-time splinting after fasciectomy or dermo-fasciectomy for Dupuytren's contracture: a pragmatic, multi-centre, randomised controlled trial. BMC Musculoskelet Disord. 2011, 12: 136.

10. Hurst LC, Badalamente MA, Hentz VR, Hotchkiss RN, Kaplan FT, Meals RA, Smith TM, Rodzvilla J; CORD I Study Group. Injectable collagenase clostridium histolyticum for Dupuytren's contracture. N Engl J Med. 2009, 361(10): 968-79.

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Title	**3. Fractures and Joint Injuries of the Hand and Wrist including Wrist Instability**
Course unit Leader	Mr. C. Heras-Palou
Credit Rating	15 credits
Aims	Acquire detailed understanding of all aspects of management of hand and wrist fractures, joint injuries including knowledge of relevant literature.
Intended Learning Outcomes	Develop familiarity with basic sciences of pathophysiology of fracture healing, non-union and malunion including relevant literature Demonstrate ability to manage hand fractures and joint injuries. Acquire working knowledge of normal and abnormal kinetics and kinematics of wrist. Be able to examine and clinically assess the unstable wrist. Be familiar with appropriate investigations for instability including wrist arthroscopy Understand the diagnostic modalities and treatment options, including surgical reconstruction for the unstable wrist
Unit Outline	Pathophysiology of fracture healing including non-union, malunion Principles and details of management of fractures and dislocations of bones and joints of fingers, thumb and carpus (+/- distal radius, distal radioulnar joint) Wrist anatomy and biomechanics Pathophysiology of wrist instability /recognised patterns of instability Investigation including imaging and wrist arthroscopy Indications and interventions for wrist instability
Teaching and Learning Methods	Private study Tutorials with supervising consultant BSSH Instructional Courses in Hand Surgery - Course 4 Fractures, Joint injuries - Course 6 Wrist Hand Fracture Management Courses University of Leicester AO Hand Fracture Courses Advanced Hand Skills Course
Content Suggested tutorials content:	Pathophysiology of fracture healing and bone grafting Principles and details of management of fractures and dislocations of bones and joints of fingers, thumb and

Tutorial 1 Fractures of the phalanges and metacarpals. Ligament injuries of the IPJs Tutorial 2 Fractures of the scaphoid. Fractures of the other carpal bones. Management of scaphoid non-union. Tutorial 3 Wrist biomechanics. . Clinical examination of the wrist. Imaging of the wrist. Carpal instability. DRUJ instability. Tutorial 4 Fractures of the distal radius and ulna. Management. Evidence available. Complications and their management.	carpus Fracture patterns and decision making in fracture management Principles of non-operative management of fractures Principles of wiring, plates and screws, external fixation and traction Diaphyseal and metaphyseal phalangeal fractures Metacarpal fractures Carpometacarpal joint injuries Soft tissue injuries of the thumb MP joint, CMCJ instability and IPJ ligament injuries Complex dislocations of MCP and PIP Joints Non-union, mal-union, infection Bone loss and complex injuries Fractures in the child's hand and wrist Distal radius fractures; metaphyseal and articular Malunion of the distal radius; osteotomy Fractures of the distal ulna TFCC injuries; DRUJ injuries. Essex-Lopresti injuries; DRUJ instability DRUJ procedures Scaphoid fractures; non-union Fractures of the carpal bones Carpal instability - acute and chronic:scapholunate, lunotriquetral and midcarpal
Assessment methods with percentage breakdown	Work place assessment • Knowledge based assessment • Clinical evaluation exercise (CEX) • Direct observation of procedure (DOPS) • Case-based discussion (CbD) Submit algorithm of management of a carpal instability or fracture problem of the hand or wrist. [Hand Diploma examination]
Reading List	See attached

Recommended Reading List / Resource Materials

Fracture of the Hand & Wrist

1. AO website resource: www.aofoundation.org
2. Schneppendahl J, Windolf J, Kaufmann RA. Distal radius fractures: current concepts. J Hand Surg Am. 2012 Aug; 37(8):1718-25.

Wrist

3. Gilula and IWIW. Wrist terminology. JBJS 84A, Supplement 1, 2002.
4. Trail IA, Stanley JK, Hayton MJ Twenty questions on carpal instability. J Hand Surg Eur Vol. 2007 Jun;32(3):240-55.
5. Mayfield, Johnson & Kilcoyne. Carpal dislocations; pathomechanics and progressive perilunar instability. Journal of Hand Surgery, 1980 5:226-241.

Clinical Management

6. Chennagiri RJ, Lindau TR. Assessment of scapholunate instability and review of evidence for management in the absence of arthritis. J Hand Surg Eur Vol. 2013 Sep;38(7):727-38.
7. Slutsky DJ, Nagle DJ. Wrist arthroscopy: current concepts. J Hand Surg Am. 2008 Sep;33(7):1228-44

DRUJ

8. Lees VC. Functional anatomy of the distal radioulnar joint in health and disease. Ann R Coll Surg Engl. 2013 Apr; 95(3):163-70.

Scaphoid Fractures

9. Davis TR. Prediction of outcome of non-operative treatment of acute scaphoid waist fracture. Ann R Coll Surg Engl. 2013 Apr; 95(3):171-6.
10. Dias JJ, Singh HP. Displaced fracture of the waist of the scaphoid. J Bone Joint Surg Br. 2011 Nov; 93(11):1433-9. Review.

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Title	**4. Osteoarthritic and inflammatory disorders of the Hand and Wrist**
Course unit Leader	Miss M. E. Birks
Credit Rating	15 credit points
Aims	Acquire detailed understanding of all aspects of management of osteoarthritic joints of the hand and wrist Acquire detailed understanding of the pathology, mechanisms of deformity and management of the inflammatory conditions affecting the hand
Intended Learning Outcomes	Develop familiarity with basic sciences of pathophysiology of osteoarthritis and rheumatoid arthritis Demonstrate ability to assess and manage arthritic small joints of the digits and wrist Be familiar with and able to undertake small joint arthrodesis and arthroplasty, limited and full wrist arthrodesis Develop familiarity with the pathology, mechanisms producing deformity, the indications for surgical treatment in the inflammatory arthritides affecting the hand and the relevant literature Demonstrate ability to manage inflammatory arthritic disorders affecting the hand
Unit Outline	Pathogenesis, clinical features and principles of management of osteoarthritic conditions of the hand and wrist Arthrodeses, excisional arthroplasty, prosthetic replacement arthroplasty Pathophysiology of rheumatoid and other inflammatory arthritides Clinical assessment and management principles in rheumatoid arthritis including planning and prioritisation – conservative and surgical treatment of specific conditions (e.g. wrist involvement, thumb disorders, MCPJ replacement, Swan neck and Boutonniere deformities)
Teaching and Learning Methods	Private study Tutorials with supervising consultant BSSH Instructional Courses in Hand Surgery – Course 4 Fractures, Joint injuries, Arthritis Course 6 Disorders of the forearm and wrist Advanced Course in Hand Surgery, Royal College of Surgeons

Contents Suggested tutorial structure: 1. Rheumatoid Arthritis of the Hand & Wrist, including DRUJ 2. Osteoarthritis of the Hand & Wrist with DRUJ (including primary, SNAC/SLAC, ulnar abutment etc) & Kienbock's Disease 3. Other Arthritides (including SLE, Psoriatic, Crystal etc) & the Clinical assessment and Management Planning Principles of all arthritic conditions of the Hand & Wrist, including DRUJ 4. Operative and Non-operative Treatments (including Hand Therapy, injection therapies, joint preserving surgery, arthroscopy, arthroplasty, arthrodesis etc)	Pathogenesis, clinical features and principles of management of osteoarthritic conditions of the hand and wrist. Conservative management techniques for osteoarthritic joints including splinting, exercises and aids to activities of daily living. Occupational therapy assessment of needs around activities of daily living Wrist and hand examination Wrist arthroscopy How to perform small joint arthrodeses, excisional arthroplasty, prosthetic replacement arthroplasty of the fingers Management of CMCJ arthritis including excisional arthroplasty. Management of radiocarpal arthritis including SLAC and SNAC wrist Kienbőck's disease Management of arthritis of the DRUJ, ulna abutment and TFCC tears Wrist denervation Inflammatory arthritides Aetiology, pathology and mechanisms producing deformity Patterns of disease and clinical assessment Planning and prioritising treatment Management options - Conservative - Surgical treatment of: Wrist disorders Extensor tendons Flexor tendons Metacarpophalangeal joint Digital deformities (swan-neck and boutonniere) Thumb deformities
Assessment methods with percentage breakdown	Work place assessment Knowledge based assessment Direct observation of procedure (DOPS) Clinical Evaluation Exercise (CEX) Case-based discussion (CbD) [Hand Diploma examination]
Reading List	See attached

Reading List / Resource Materials

Osteoarthritis

1. Armstrong AL, Hunter JB, Davis TR. The prevalence of degenerative arthritis of the base of the thumb in post-menopausal women. J Hand Surg Br. 1994 Jun;19(3):340-1
2. Cohen M, Kozin S. Degenerative arthritis of the wrist: proximal row carpectomy versus scaphoid excision and four corner arthrodesis. JHS(A) 2001, 26(A): 94-104
3. Davis TCR et al. Trapeziectomy alone, with tendon interposition or with ligament reconstruction? A randomized prospective trial. JHS(B) 1997, 22B:689-694
4. Adams, B. Wrist arthroplasty: partial and total. Hand Clinics 2013, 29:79-87
5. Buck-Gramcko D. Denervation of the wrist joint. JHS(A) 1977, 1:54-61
6. Swindells MG, Logan AJ, Armstrong DJ, Chan P, Burke FD, Lindau TR The benefit of radiologically-guided steroid injections for trapeziometacarpal osteoarthritis. Ann R Coll Surg Engl. 2010;92(8):680-4

Kienbőck's Disease

7. Lichtman, D et al The classification and Treatment of the Kienböck's Disease: The state of the Art and a Look at the Future. J Hand Surgery 2010; 35E: 7: 549-554

Inflammatory Arthritides

8. Chung KC. Current concepts in the management of the rheumatoid hand. JHS (A) 2011, 36(4): 736-747
9. Chung KC, Sebastin SJ. Reconstruction of digital deformities in rheumatoid arthritis. Hand Clinics 2011, 27(1): 87-104

Treatment Options and Choices

10. Kozlow, J & Chung, K Current Concepts in the Surgical Management of Rheumatoid and Osteoarthritic Hands and Wrists Hand Clinics 2011, 27 (1): 31

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Title	**5. Tendon Disorders**
Course unit Leader	Mr R. Eckersley
Credit Rating	15 credits
Aims	To give a detailed understanding of all aspects of flexor and extensor tendon injury and associated management. To provide knowledge of the basic science and evidence base for current practice in this area.
Intended Learning Outcomes	Detailed knowledge of science / laboratory studies on tendon healing and tendon repair. To be able to undertake flexor and extensor tendon repairs including multistrand repairs of flexor tendons. Be familiar with techniques of flexor / extensor tendon repair and reconstruction, including tendon grafting. (Rehabilitation of tendon injury is covered in Course unit 1)
Unit Outline	Pathophysiology of tendon healing Flexor tendon injury and repair (knowledge of literature) Extensor tendon injury and repair Tenolysis and tendon grafting Trigger fingers, De Quervain's
Teaching and Learning Methods	Private study Tutorials with supervising consultant Discussion with hand therapists on rehabilitation regimens Advanced Hand Skills Course Instructional Courses in Hand Surgery – Course 3 Tendon Injury, Paralysis and Rehabilitation
Content Tutorial suggestions: 3 Flexor and one extensor 1. A. Anatomy B. Biomechanics C. Tendon healing 2. Tendon injuries. Diagnosis by clinical exam, use of US. Repair techniques, basic science of multistrand, epitendinous, pulley repairs, suture size, needle types. Approaches, windows, tendon retrieval, preferred repair.	Flexor tendon Anatomy - including both flexor and extensors. Blood supply, pulleys and retinacula - with reference to injury and repair. Collagen structure. Physiology and mechanics - how tendons work, what forces are applied. Concepts of friction and work (Newtons) and how these may change after injury and repair. Understanding Quadriga effect and lumbrical finger. The biology of tendon injury and repair Techniques of tendon repair - clinical studies of

3. Tendon rehabilitation, complications and reconstruction 4. Extensor tendon injury zones 1 to 8 and other tendon disorders.	different repair and rehabilitation techniques including multistrand repairs. Complications and reconstruction after tendon injury and repair - the rationale of rehabilitation programmes. The science behind the regimens. The complications of tendon injury and surgery. How to manage adhesions and when and how to do tenolysis. When and how you perform one or two stage tendon reconstruction. Pulley reconstruction. Extensor tendon Anatomy - repair, rehabilitation and reconstruction, including repair techniques. Rehabilitation regimens. Complications and how to manage them. Treatment of Boutonniere and Mallet injuries. MPJ subluxating extensors. Boxers knuckles. Trigger finger & De Quervain's stenosing tenovaginoses.
Assessment methods	Work place assessment • Knowledge based assessment (KBA) • Case based discussion (CBD) • Direct Observation of Procedure (DOPS) • Prepare review article on topic of choice [Hand Diploma examination]
Reading List	See attached

Recommended Reading List / Resource Materials

1. Doyle J R. Anatomy of the flexor tendon sheath and pulley system: A current review. J Hand Surg 1989, l4A: 349-351.

2. Chang J. Studies in Flexor Tendon Reconstruction: Biomolecular Modulation of Tendon Repair and Tissue Engineering J Hand Surg 2012, 37A: 552-561.

3. Savage R, Risitano G. Flexor tendon repair using a “six strand” method of repair and early active mobilization. Journal of Hand Surgery (British Volume) 1989, 14B: 396-399.

4. Small JO, Brennen MD, Colville J. Early active mobilization following flexor tendon repair in zone 2. Journal of Hand Surgery (British Volume) 1989, 14B: 383-391.

5. Starr HM, Snoddy M, MD, Hammond KE, MD, Seiler III JG. Flexor Tendon Repair Rehabilitation Protocols: A Systematic Review. J Hand Surg 2013, 38A: 1712-1717.

6. From the IFSSH Flexor Tendon Committee (Chairman: Jin Bo Tang) IFSSH Flexor Tendon Committee Report 2014 Jin Bo Tang, James Chang, David Elliot, Donald H. Lalonde, Michael Sandow and Esther Vögelin. The Journal of Hand Surgery 2014, Vol 39E (1) 107-115.

7. Wu YF, Tang JB. Recent developments in flexor tendon repair techniques and factors influencing strength of the tendon repair. The JHS(E) 2014, 39E(1): 6-19.

8. Elliot D. Primary flexor tendon repair-operative repair, pulley management and rehabilitation. J Hand Surg [Br] 2002, 27: 507-513.

9. Dy JC, Hernandez-Soria A, Ma Y, PhD, Roberts TR, Daluiski A. Complications after Flexor Tendon Repair: A Systematic Review and Meta-Analysis. J Hand Surg 2012, 37A: 543-551.

10. Ng CY, Chalmer J, Macdonald DJ, Mehta SS, Nuttall D, Watts AC Rehabilitation regimens following surgical repair of extensor tendon injuries of the hand-a systematic review of controlled trials. J Hand Microsurg. 2012, 4(2): 65-73.

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Title	**6. The Child's Hand / Tumours /Vascular Disorders**
Course unit Leader	Mr Henk Giele
Credit Rating	15 credits
Aims	To acquire knowledge and understanding of the more common aspects of children's hand surgery. To appreciate the special needs of children undergoing hand interventions for both congenital and acquired conditions. To acquire knowledge of the pathology, clinical presentation, and management of common benign and malignant tumours affecting the upper limb. To acquire knowledge and understanding of traumatic and acquired vascular disorders affecting the upper limb.
Intended Learning Outcomes	Embryology of the hand and the basis of malformations Normal growth and development The epiphyses Classification of hand anomalies Transverse absence Radial and ulnar dysplasia Syndactyly Camptodactyly Trigger digits Polydactyly Symbrachydactyly Thumb hypoplasia Macrodactyly Arthrogryposis Madelung deformity Ring constriction syndrome Obstetrical brachial plexus palsy Cerebral palsy (and spasticity) Prosthetics

	Specific injuries - supracondylar fracture of humerus and Volkmann's ischaemic contracture Demonstrate understanding of the principles of management of cutaneous, soft tissue and bony tumours. Have working knowledge of surgical pathology and oncology including biopsy techniques, excision margins, reconstruction methods, management of regional lymph nodes, and formal amputations. Demonstrate understanding of vascular lesions including Raynaud's, aneurysms, and vascular tumours including haemangiomas and vascular malformations. Demonstrate understanding of management of acute and chronic vascular insufficiency syndromes, including compartment syndrome / Volkmann's ischaemic contracture and surgical fistulae.
Unit Outline	Principles of management of the children's hand. Classification, reconstructive principles and timing of operations for congenital difference. Knowledge of management including operative technique for syndactyly, polydactyly, duplicate thumb, hypoplastic thumb, radial dysplasia and acquaintance with a variety of rarer conditions. Specific injuries – Salter Harris epiphyseal fractures, supracondylar fracture of the humerus / Volkmann's ischaemic contracture. Management including operative surgery of benign and malignant soft tissue and bony tumours including excisions, amputations, and reconstructions. Includes principles of management of skin cancer and the regional lymph nodes. Management including operative surgery of vascular insufficiency syndromes, haemangiomata and vascular malformations. Vascular injury and its management including compartment syndrome.
Teaching and Learning Methods	Private study Tutorials with departmental tutor Instructional Course in Hand Surgery –Course 5 The Child's Hand, Tumours, Vascular Disorders
Content Suggested tutorial structure 1. Congenital hand classification, overview on the management of children, growth and development, surgical timing and rehabilitation. Discussion on failures of	The aetiology, classification, risk factors and surgical management of the conditions listed above: lesions such as lipoma, giant cell tumours of bone and tendon sheath, ganglia, and malignant lesions including skin, and sarcomas.

formation and differentiation. 2. Congenital hand including duplication, undergrowth, overgrowth, constriction ring and systemic disorders. 3. Vascular disorders - includes VWF, Raynaud's, haemangiomas, vascular malformations. 4. Tumours - includes benign and malignant soft tissue and bony.	
Assessment Methods	Work place assessment • Knowledge based assessment • Case based discussion (CbD) • Clinical Evaluation Exercise (CEX) [Hand Diploma examination]
Reading List	See attached

Reading List / Resource Materials

1. Murray M, Athanasian EA, Jebson PLJ. Tumours of the Hand and Upper Extremity: Principles of Diagnosis and Management I and II. Hand Clinics 2004, 20 (part 2&3).

2. Revised UK guidelines for the management of cutaneous melanoma: http://www.bad.org.uk/library-media/documents/Melanoma_2010.pdf

3. Telfer NR, Colver GB, Bowers PW. Guidelines for the management of basal cell carcinoma. British Journal of Dermatology 1999, 141: 415-423. http://www.mccn.nhs.uk/userfiles/documents/BCC_Guidelines.pdf

4. Arshad A, McCarthy MJ. Management of limb ischaemia in the neonate and infant. Eur J Vasc Endovasc Surg 2009, 38(1): 61-5.

5. Landry GJ. Current medical and surgical management of Raynaud's syndrome. J Vasc Surg 2013, 57(6): 1710-6.

6. Kalyani BS, Fisher BE, Roberts CS, Giannoudis PV. Compartment syndrome of the forearm: a systematic review. J Hand Surg Am 2011, 36(3): 535-43.

7. Tonkin MA, Tolerton SK, Quick TJ, Harvey I, Lawson RD, Smith NC, Oberg KC. Classification of congenital anomalies of the hand and upper limb: development and assessment of a new system. J Hand Surg Am. 2013, 38(9): 1845-53.

8. Friden J. Vibration damage to the hand: clinical presentation, prognosis and length and severity of vibration required. J Hand Surg. [Br] 2001, 26(5): 471-4.

9. Prasarn ML, Ouellette EA. Acute compartment syndrome of the upper extremity. J Am Acad Orthop Surg. 2011, 19(1): 49-58.

10. Amsdell SL, Hammert WC. High-pressure injection injuries in the hand: current treatment concepts. Plast Reconstr Surg. 2013, 132(4): 586e-591e.

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Title	**7. Nerve Disorders**
Course unit Leader	Mr Ian McNab
Credit Rating	15 credits
Aims	To acquire knowledge and understanding of peripheral nerve biology and nerve injury, repair and reconstruction. To understand and be able to plan reanimation of the paralysed upper limb, including tendon transfers.
Intended Learning Outcomes	Understanding of the physiology of the peripheral nerve and the pathophysiology of nerve injury and repair/regeneration. Be able to interpret neurophysiological investigation including the EMG. Be able to assess brachial plexus injury and understand principles of management. Understand how to prevent and manage common iatrogenic nerve injuries. Be able to undertake nerve repair including nerve grafting. Have a working knowledge of the operations used for reanimation of the upper limb, including muscle and tendon transfers. Understand the principles of management of cerebral palsy and tetraplegia. Be familiar with nerve compression syndromes, including detailed knowledge of carpal tunnel syndrome. Be able to select appropriate regional anaesthetic techniques and be familiar with analgesic management.
Unit Outline Suggested tutorial outline: 1. Carpal tunnel & other nerve compression syndromes (clinical features and basis of management) 2. Neurophysiological investigation 3. Classification and assessment of nerve injury 4. Nerve repair, including grafting Management of iatrogenic nerve injury Brachial plexus injury – assessment, priorities in surgical planning, principles of alternatives for reconstruction, including paediatric brachial plexus 5. Tendon transfers for nerve palsy, including	

principles of management of spastic conditions such as cerebral palsy and tetraplegia	
Teaching and Learning Methods	Private study Tutorials with departmental tutor Basic and Advanced Hand Skills Course Royal College of Surgeons Instructional Courses – Course 2 Nerve Injury & Compression, Pain, Anaesthesia - Course 3 Tendon Injury, Paralysis & Rehabilitation
Content	Basic Sciences pertinent to nerve injury and healing. How to perform nerve repair, including grafting. How to assess brachial plexus injury, including priorities in surgical planning and alternatives for reconstruction. Principles of tendon transfers for nerve palsy, including principles of management of spastic conditions such as cerebral palsy and tetraplegia. Prevention and management of iatrogenic nerve injury. Detailed knowledge of the management of carpal tunnel syndrome (knowledge of important papers in literature required). Knowledge of the clinical features and basis of management of other nerve compression syndromes. Interpretation of neurophysiological investigation (EMG). Regional anaesthesia, analgesia and CRPS/pain syndromes. Basic principles of brachial plexus injury and tetraplegia.
Assessment methods	Work place assessment • Knowledge based assessment • Case-based assessment (CbD) • Clinical evaluation exercise (CEX) Prepare a critique of papers presented at a scientific conference and present to department [Hand Diploma examination]
Reading List	See attached

Reading List / Resource Materials

1. Hammert WC. Peripheral nerve conditions: Using evidence to guide treatment. Hand Clinics 2013, 29 (3): 317-458.

2. Lundborg G. A 25 year perspective of peripheral nerve surgery: Evolving neuroscientific concepts and clinical significance. Journal of Hand Surgery 2000, 25A: 391-414.

3. Hart AM, Wiberg M. Mini-Symposium: Nerve compression Syndromes: (i) Nerve compression or mechanical neuropathy: Neuropathology. Current Orthopaedics 2001, 15: 245-248.

4. Giele H. Mini-Symposium: Nerve compression Syndromes: (ii) Evidence-based treatment of carpal tunnel. Current Orthopaedics 2001, 15: 249-255.

5. Collier A. Burge P. Mini-Symposium: Nerve compression Syndromes: (iii) Management of mechanical neuropathy of the ulnar nerve at the elbow. Current Orthopaedics 2001, 15: 256-263.

6. Schenker M, Kay SPJ. Mini-Symposium: Nerve compression Syndromes: (iv) Mechanical neuropathy at the thoracic outlet and associated pain syndrome. Current Orthopaedics 2001, 15: 264-274.

7. Weiss AA, Mulcahey MJ. Contemporary issues related to Management of the upper limb in Tetraplegia. Hand Clinics 2008, 24(2): 157-218.

8. Knutsen EJ, Calfee RP. Uncommon upper extremity compression neuropathies. Hand Clin. 2013, 29(3): 443-53.

9. Fox IK, Mackinnon SE. Adult peripheral nerve disorders: Nerve entrapment, repair, transfer and brachial plexus disorders. Plast Reconstr Surg 2010, 127: 105e-118e.

10. Brandsma W, Sammut D. Update on tendon transfers for peripheral nerve injuries.
11. J Hand Surg Am. 2011, 36(4): 752-3.

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APPENDIX 4

BOOK READING LIST

These books encompass the specialty of hand surgery and provide a firm base of information on which to build your hand surgery knowledge. The reading lists given in each module contain current or important journal articles to supplement the books. You would also benefit from regularly reading the European and American Journals of Hand Surgery.

- Green's Operative Hand Surgery, 6th Edition. Wolfe, Pederson, Hotchkiss and Kozin. Churchill Livingstone 2011. ISBN: 9781416052791
  The complete reference guide to Hand Surgery, covering all conditions of the hand, wrist and elbow. The format has mostly excellent illustrations and explains each topic through diagnosis to surgical technique with summaries of literature evidence before giving the authors recommended treatment. The online element includes videos, case studies and updates.

- Lister's The Hand: Diagnosis and Indications, 4th Edition. Smith.
  Churchill Livingstone 2001. ISBN: 9780443064166
  This is a beautifully written book covering the examination of the hand and wrist and the diagnosis and management of a wide range of conditions.

- The Growing Hand: Diagnosis and Management of the Upper Extremity in Children. Gupta, Kay, Scheker.
  Mosby 2000. ISBN: 0723421331
  A superb reference book covering the entirety of congenital and acquired conditions in children.

- Fundamental Techniques of Plastic Surgery and their surgical applications. McGregor and McGregor.
  Churchill Livingstone 2000. ISBN 9780443063725
  An excellent, clear, concise book. Part one explains the basics of plastic surgery, including a great description of the z-plasty. The hand is a covered in a chapter in part two. Although the newer flaps are not in this book, the chapter is a useful introduction to soft tissue cover of the hand.

- Reconstructive Surgery: Principles, Anatomy and Technique. Mathes and Nahai.
  Churchill Livingstone 1997. ISBN: 0443079811
  The introductory chapters of this two volume set explain the general principles of flap selection and harvest. The rest of the book has full descriptions of the benefits and limits of a wide range of flaps, illustrated with clear diagrams.

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APPENDIX 5

ASSESSMENT INSTRUMENTS AND GUIDANCE NOTES

British Society for Surgery of the Hand

KNOWLEDGE-BASED ASSESSMENT (KBA)

Consultant Supervisor Full Name:	
Participating Surgeon Full Name:	
GMC Number:	
Date of Assessment:	
Training Post:	

Module: 1 2 3 4 5 6 7

	Below Average	*Average*	*Above Average*	*N/A**
1. Understanding of principles	☐	☐	☐	☐
2. Familiarity with relevant literature	☐	☐	☐	☐
3. Knowledge of applied science	☐	☐	☐	☐
4. Understanding of pathology	☐	☐	☐	☐
5. Familiarity with patterns of disease or injury	☐	☐	☐	☐
6. Use of appropriate diagnostic methods	☐	☐	☐	☐
7. Knowledge of appropriate treatment	☐	☐	☐	☐
8. Overall grasp of subject	☐	☐	☐	☐

*N/A – not assessed /not applicable

Suggestions for development

Agreed action

	Low									**High**
Trainee satisfaction with KBA	1	2	3	4	5	6	7	8	9	10

Trainer's Signature:	**Trainee's Signature:**

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British Society for Surgery of the Hand

CLINICAL EVALUATION EXERCISE (CEX)

Consultant Supervisor Full Name:	
Participating Surgeon Full Name:	
GMC Number:	
Date of Assessment:	
Training Post:	

Module: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

Topic:

	Below Average	*Average*	*Above Average*	*N/A**
1. History Taking	☐	☐	☐	☐
2. Physical Examination Skills	☐	☐	☐	☐
3. Communication Skills	☐	☐	☐	☐
4. Knowledge of Condition	☐	☐	☐	☐
5. Clinical Judgement	☐	☐	☐	☐
6. Professionalism	☐	☐	☐	☐
7. Management Planning	☐	☐	☐	☐
8. Other Comments	☐	☐	☐	☐

*N/A – not assessed /not applicable

Suggestions for development

Agreed action

	Low									**High**
Trainee satisfaction with CEX	1	2	3	4	5	6	7	8	9	10

Trainer's Signature:	**Trainee's Signature:**

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British Society for Surgery of the Hand

CASE-BASED DISCUSSION (CbD)

Consultant Supervisor Full Name:	
Participating Surgeon Full Name:	
GMC Number:	
Date of Assessment:	
Training Post:	

Module: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

Topic:

	Below Average	*Average*	*Above Average*	*N/A**
1. Medical Record Keeping	☐	☐		☐
2. Clinical Assessment	☐	☐		☐
3. Investigation and Referrals	☐	☐		☐
4. Treatment	☐	☐		☐
5. Follow-up and Future Planning	☐	☐		☐
6. Professionalism	☐	☐		☐
7. Overall Clinical Judgement	☐	☐		☐
8. Other Comments	☐	☐		☐

*N/A – not assessed /not applicable

Suggestions for development

Agreed action

Trainee satisfaction with CbD **Low** 1 2 3 4 5 6 7 8 9 10 **High**

Trainer's Signature:	**Trainee's Signature:**

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British Society for Surgery of the Hand

DIRECT OBSERVATION OF PROCEDURAL SKILLS (DOPS)

Consultant Supervisor Full Name:	
Participating Surgeon Full Name:	
GMC Number:	
Date of Assessment:	
Training Post:	

Module: 1 2 3 4 5 6 7

Operation:

	Below Average	Average	Above Average	N/A*
1. Understands Indications, Relevant Anatomy, Technique of Procedure	☐	☐	☐	☐
2. Pre-procedure preparation (Informed Consent, Marking Side, Anaesthesia, Tourniquet Management	☐	☐	☐	☐
3. Technical Aspects (Aseptic Technique, Tissue Handling, Dissecting Skill)	☐	☐	☐	☐
4. Post-procedure Management (Analgesia, Splints, Specifying ongoing Care)	☐	☐	☐	☐
5. Communication Skills	☐	☐	☐	☐
6. Consideration of Patient/Professionalism	☐	☐	☐	☐
7. Overall Ability to Perform Procedure	☐	☐	☐	☐

*N/A – not assessed /not applicable

Suggestions for development

Agreed action

	Low									High
Trainee satisfaction with DOPS	1	2	3	4	5	6	7	8	9	10

Trainer's Signature:	**Trainee's Signature:**

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APPENDIX 6
GUIDANCE ON PLAGIARISM AND OTHER FORMS OF ACADEMIC MALPRACTICE

Definition
Plagiarism is misrepresenting other people's work as your own. It can be regarded as 'academic theft.' The work in question could be written words but also includes ideas, arguments, diagrams, images or other data. The misrepresentation could be a specific overt claim that someone else's work is your own or, just as seriously, failing to acknowledge adequately the sources you have used. The other person's work could have come from a publication, the World Wide Web, another doctor's work etc.

In its most blatant form plagiarism involves copying large parts of someone else's work and claiming it as your own. It also includes extracting shorter phrases or sentences and linking them together again presenting them as your own.

Plagiarism amounts to academic misconduct – that is, it is a form of cheating. It is therefore treated seriously and is a probity issue impacting on your fitness to practice.

How to avoid plagiarism
Plagiarism is avoided by ensuring you always acknowledge the source of any information you have included in your written work or presentations. Make it clear which parts of your work have come from someone else's contribution.

Specifically, you should avoid:

- Copying word-for-word or closely paraphrasing directly from a text
- Taking data or clinical images from someone else and claiming it as your own
- Copy from another person's notes
- Changing a few words around and passing off something as your own work when it is not

Do try to:

- Write notes in your own words about any articles, books or other material you obtain
- When you need to copy a passage from a given source mark it in highlighter so you can clearly identify it subsequently
- Write the reference next to any quotation immediately so that you are never tempted to save time later by using it without acknowledgement
- If quoting anything longer than a phrase from someone else's work you should present it as a quotation, using inverted commas and refer it to the sources in full in a footnote or bibliography
- Avoid lengthy quotations altogether
- If in doubt as to whether or not something you are proposing might lead to an accusation of plagiarism discuss it first with your clinical supervisor

Ethical Guidelines
Detailed advice on appropriate professional conduct is laid down in 'Good medical practice' of the General Medical Council www.gmc-uk.org

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APPENDIX 7

EQUAL OPPORTUNITIES POLICY

The BSSH is committed to treating all its employees, job applicants and students equally.
The BSSH will take all reasonable steps to employ, promote and train employees, admit, educate and assess students without regard to gender, colour, ethnic or national origin, age, socio-economic, background, disability, religious or political beliefs, family circumstances, sexual orientation or any other relevant matter.

The BSSH will take all reasonable steps to provide a working and learning environment in which all people are treated with respect and dignity and without harassment.

Employees
The BSSH recruitment process for posts at all levels will be conducted so as to select the most suitable person result for the job in terns of experience, ability and qualifications.

All terms of employment, benefits, facilities and service will reviewed regularly in order to ensure there is no unlawful discrimination. The BSSH will ensure that male and female employees receive equal pay for like work, work rated as equivalent or work of equal value. In order to achieve this, it operated a pay system that is transparent, free from bias and based on objective criteria.
It is against BSSH policy for any employee to harass another employee. Harassment means engaging in conduct which violates or is intended to violate another employee's dignity at work or creates an intimidating, hostile, degrading, humiliating or offensive work environment for the other person. Harassment specifically includes bullying, sexual harassment and racial harassment. All such allegations will be dealt with seriously, confidentially and expeditiously. Any employee who is found to have discriminated against or harassed another employee will be subject to disciplinary action and, in cases amounting to gross misconduct, may be liable to summary dismissal.

The BSSH will regularly monitor the effects of selection decisions, personnel and pay practices and procedures in order to assess whether equal opportunity and dignity at work are being achieved.

Participating surgeons
The BSSH is committed to:

- Supporting a policy of widening opportunity in and access to education
- Communicating its equal opportunities policy widely to staff and students
- Creating a learning environment which is free from prejudice, discrimination or harassment
- Maintaining admissions procedures and selection criteria which provide for equality of opportunity for all applicants and ensuring that all learning, assessment and other academic processes take account of its equal opportunities policy
- Monitoring the effectiveness of its equal opportunities policy

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APPENDIX 8

APPEALS AND COMPLAINTS

Complaints

We aim to provide high standard of service to our diploma participants at all times. However, if you wish to draw our attention to any issues you feel are below the expected standard, we will make every effort to resolve your complaint in a reasonable and flexible manner so that a fair and just outcome is achieved.

- **Informal complaint**

Wherever possible, we seek to resolve complaints informally. Therefore we encourage you first to discuss the matter informally with the member of staff concerned as soon as possible. If you feel it is more appropriate, you may discuss the problem with your Clinical Supervisor, Course unit Leader, Head of Student Support (University) or the Programme Director. It would be most helpful if you indicate at the outset the form of remedy you are seeking. Doing so will not prejudice the eventual outcome.
It is essential that you act straightaway if the particular issue you have is likely to adversely affect your studies in any way, for example if your learning materials have not arrived or there is a problem regarding attending study days or in having special arrangements for an assessment.

- **Formal complaint**

If the matter is not resolved informally, and you wish to make a formal complaint, please do so by putting the details in a letter addressed to the Programme Director at the BBSH.

Although some queries can be dealt with by telephone, it is best for you to put it in writing and send it by post, email or fax. This ensures that there is a record of your query and that it is expressed and recorded accurately. If you set it out as a numbered sequence of points, including any known dates or references it will help us understand the circumstances and events clearly. Please quote your student reference number and the name of the course unit you are currently studying.

We will send a reply within 10 working days of receiving your query, either answering it fully or acknowledging receipt of it and indicating when a full answer will, or is likely to be given. The Programme Director will appoint a senior member of staff to investigate your complaint. We undertake to provide you with a response within 28 days of your written complaint. If you are dissatisfied with the written response you have the right to have the matter reviewed by the President of the BSSH.

Definitions

- An appeal is a request for a review of a decision on progression, assessment or award
- An appellant is a person who brings an appeal
- A complaint is a specific concern about course, course unit or programme provision or a related academic service
- A complainant is a person who brings a complaint

General principles

We aim to deal with all appeals and complaints promptly, fairly and consistently. Wherever possible we will deal with them informally and as closely as we can to the point where the particular issue arose.

Our appeals and complaints procedure is approved by the Academic Panel and is subject to regular review, taking into account current good practice. As far as possible, these procedures will be clear and accessible and will reflect the principles of natural justice (the right for you to be heard and for such procedures to be free from bias).

In circumstances where a hearing becomes necessary, in conjunction with your appeal or complaint, you will be entitled to attend that hearing and to be accompanied by a person of your choice if you wish.

Your privacy and confidentiality will be respected and assured wherever possible. You will not be disadvantaged or discriminated against as a result of making a genuine appeal or complaint.

You will be entitled to receive notification of the outcome of your appeal or complaint and to be informed about any further procedures open to you if you are dissatisfied with that outcome. The BSSH undertakes to meet reasonable and proportionate incidental expenses necessarily incurred if your appeal or complaint is successful.

Grounds for appeal

You have the right to make a formal appeal against your assessment result, decision or progression on the following grounds only:

1. Where there is evidence of a material error in the conduct of the assessment or the Assessment's Board's procedures
2. Where there are exceptional extenuating circumstances

In respect of 2. you **must** notify the BSSH of any extenuating circumstances before your assessment takes place, unless for reasons outside your control, you were unable to do so. The procedure for notifying us is set out below.

The following specifically are **not** grounds for appeal:

- Challenges to the academic judgement of examiners as to the outcome of an assessment, decision on progression
- A claim that there have been exceptional mitigating circumstances where there then is no evidence produced in respect of the same

Appeals procedure

1. Informally question a decision

If you wish to question a decision you need to contact the Programme Director as soon as possible after receiving notification of that decision and, in any event within 28 days. Where possible and appropriate, we will deal with the matter informally, normally be referring it back to the body or individual who conveyed the original decision to you.

Although some queries can be dealt with by telephone, it is best for you to put it in writing and send it by post, email or fax. This ensures that there is a record of your query and that it is expressed and recorded accurately. If you set it out as a numbered sequence of points, including any known dates or references it will help us understand the circumstances and events clearly. Please quote your student reference number and the name of the course unit you are currently studying.

We will send a reply within 10 working days of receiving your query, either answering it fully or acknowledging receipt of it and indicating when a full answer will, or is likely to be, given.

If you are still dissatisfied with the outcome after this, and believe you have grounds, you may make a formal appeal.

2. Making a formal appeal

Where it is impossible or inappropriate to settle an appeal informally, you may wish to make a formal appeal. Formal appeal may also be necessary if you are dissatisfied with the result of informal appeal. You must give full details to the Programme Director in writing within 28 days of the publication of the exam results.

You should:

- Explain the grounds of your appeal, and
- Attach any information or correspondence that you consider to be relevant

The Programme Director will acknowledge receipt of your appeal and conduct a preliminary review of the circumstances surrounding the appeal. You may be asked to supply further information or documents. At this stage the Programme Director has the power to dismiss any application that is judged to be vexatious, frivolous or otherwise an abuse of process. If so you will be advised in writing at the earliest opportunity. No appeal will be struck out solely because you have made minor procedural errors in your appeal application.

An appeal which progresses will be referred by the Programme Director to the Appeal Panel which will conduct a review of the matter.

The Appeal Panel will be established by the Chairman of Examiners under the delegated authority of the Academic Panel. The composition of the Appeal Panel is as follows:

- Chairman of Examiners
- Programme Director (Hand Diploma Subcommittee Chair)
- Chairman of Education & Training Committee BSSH
- Academic advisor to the University for the Hand Diploma

The onus is on you to prove that the relevant ground(s) for appeal have been made out. You have the right to attend the appeal hearing in person and to be accompanied by a person of your choice.

The Appeal Panel has the following powers:

- To uphold your appeal and nullify your original assessment results. You will then have the right to sit the exam as if for the first time and no fee will be charged.
- To uphold your appeal and refer the matter back to the Assessment Board who will have the final decision

- To decide that your Appeal is not upheld and the original decision stands

The Programme Director can give you further advice and guidance about the process for making a formal appeal.

Final appeal to the University

In case of persisting disagreement the University Appeals process will investigate the conduct of the appeal to date to ensure that all due process has been followed. The decision itself will not be revisited unless there has been an aberration of process.

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APPENDIX 9
APPLICATION FORM FOR REGISTRATION WITH BSSH

British Society for Surgery of the Hand

Application Form for Registration

NOTE: This form is to be completed by both the participating surgeon and their consultant supervisor. The supervisor does not personally have to deliver every module but should liaise with colleagues and obtain their commitment to cover other sections as appropriate.

PARTICIPATING SURGEON SECTION

Name:	
Home Address:	
Home Telephone:	
Mobile:	
E-Mail:	
NTN	
GMC Number	
CCT Date (for Trainees)	
FRCS Orth/Plast Pass date	

Intending to study (select one):

- Full-time (12 months from registration to completion)
- Part-time (18-24 months from registration to completion)

Details of Higher Surgical and Advanced Hand Surgery Training:

Details of the advanced hand surgery training experience that the participating surgeon will undertake should be entered here. A minimum of 6 months following FRCS(Orth/Plast) is required. This may be undertaken within the existing rotation or may take the form of one of the national advanced training posts (ATPs).

Hand Surgery Post(s):	
Date of Commencement:	
Date of Completion:	
Signature of surgeon:	

CONSULTANT SUPERVISOR SECTION:

The Consultant Supervisor will be responsible for issuing all module tutors with the tutor advice document (Appendix 11)

Name:	
Departmental Address of Consultant Supervisor:	
Work Telephone:	
Mobile:	
E-mail:	
Rotation:	
BSSH Member (Yes/No)	

Training Credentials/Experience of the Consultant supervisor (It will be helpful if previous training experience/courses/qualifications could be listed here)

The consultant supervisor is asked to here indicate the person responsible for teaching and delivering the modules. Where others are involved their express agreement is required. It is anticipated that within a region orthopaedic and plastic surgery departments will work together to deliver the syllabus.

It is not advised that the same Consultant acts for tutor to more than TWO modules

	Name of Consultant(s) who will deliver module
Module 1 Basic Sciences and Rehabilitation	
Module 2 Skin and Soft Tissues/Dupuytren's Contracture	
Module 3 Fractures and Joint Injuries, including Wrist Instability	
Module 4 Osteoarthritic and inflammatory disorders	
Module 5 Tendon Disorders	
Module 6 The Child's Hand/Tumours/Vascular Disorders	
Module 7 Nerve Disorders	

BSSH with the UNIVERSITY OF MANCHESTER
Postgraduate Diploma in Hand Surgery

BASE ROTATION TRAINING PROGRAMME DIRECTOR SECTION

The Programme Director needs to confirm that the rotation will accommodate and deliver the programme as outlined in the Programme Handbook. The Programme Director should further confirm that a minimum of 6 months attachment substantially within a hand surgery practice is currently allocated to or has been started by the applicant. In the case of applicants (including existing consultants) who have already completed their advanced hand surgery training the Programme Director should liaise with the supervising consultant surgeon as to how the tutorials and assessments can be delivered alongside the respective existing commitments.

Programme Director Name:	
Email:	
Signature:	
Date:	
Rotation Name	
Candidate NTN number	

EDUCATIONAL DIRECTOR SECTION

[To be completed by the BSSH Office]

The Educational Director of the Hand Diploma programme will review the application in conjunction with the members of the Education & Training Committee and will sign off the application when it is judged that the necessary criteria for entry have been fulfilled.

Name:	
Signature:	
Date:	

FEE

Current fee for the course including examination is £1050. Please note: once your registration is accepted by the BSSH the fee becomes non-refundable.

Cheque payable to 'British Society for Surgery of the Hand'

Or

Credit Card Details:

* Access/Visa/Mastercard/Eurocard/Debit/Maestro * (delete as applicable)

Card Number:	
Valid from:	
Expiry Date:	
Issue No: (Maestro only)	
Card Validation Code (CVC)	

Card Holder's Name:	
Billing Address: (as per credit card statement)	
Amount to be Debited:	
Signature:	
Date:	

BRITISH SOCIETY FOR SURGERY OF THE HAND
at the Royal College of Surgeons, 35-43 Lincoln's Inn Fields, London WC2A 3PE
Telephone: 020 7831 5162, Fax: 020 7831 4041
E-mail: secretariat@bssh.ac.uk, Website: www.bssh.ac.uk

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APPENDIX 10

MODULE 2 DVD BRIEF

Guidance notes: The purpose of this exercise is to demonstrate an operation from the following list and to record this in DVD format.

- Dupuytren's - Primary procedure excluding dermofasciectomy
- Basal thumb osteoarthritis - Open procedure
- Hand or wrist ligament repair or reconstruction
- Open reduction and internal fixation of a fracture of the hand or wrist including corrective osteotomy for a malunion
- Flexor tendon repair
- Tendon transfer surgery
- Major nerve repair
- Local flap

There are important consent issues arising in an exercise of this nature. The patient must be informed that you are undertaking a recording of the operation for educational purposes and their specific written consent for the same obtained.

You may record yourself operating on several patients and select from several that you initially prepare that which you choose to submit. You are not being judged on the quality of the video but on the quality of the surgery so there is no need to spend too much time on editing. We suggest a finished length of approximately 7-15 minutes.

Representative parts of the stages listed below should be demonstrated in a verbal introduction and/or visibly:

- Explanation of choice of procedure - including patient history, examination findings & indications
- WHO correct site surgery check
- Application of tourniquet
- Prepping up
- Demonstration skin markings
- Approach and surgical incisions
- Demonstration of pertinent anatomy
- Surgical steps for the procedure and tissue handling
- Haemostasis
- Skin cover and closure

- Application of dressing and splint

We believe that you will benefit from watching yourself operating and this may assist with improving aspects of your technique. An examiner to the programme will score and mark the DVD on defined parameters and send these comments to the BSSH office for your records. This assessment allows comparison with other candidates and helps to validate the programme nationally. It will help to ensure that all are being marked to the same standard and is part of our quality assurance measures. In cases of a doubtful pass the educational director to the programme will adjudicate and where necessary request a new DVD be submitted.

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APPENDIX 11

BRIEFING GUIDANCE FOR BSSH HAND DIPLOMA TUTORS

Thank you for agreeing to teach a module of the Hand Diploma. It is hoped that you will find it a rewarding and enjoyable experience. The aim of the Diploma is to cover the breadth and depth of Hand Surgery, thereby preparing trainees for consultant practice as a Hand Surgeon. An individual tutor can usually successfully teach 2 modules to each Diploma candidate and on occasion 3 but more than that is strongly discouraged.

The teaching of each module is via 4 tutorials followed by a mini viva (called a Knowledge Based Assessment in this context). I find it useful to divide up the syllabus for the module in advance guided by the sections in the 2013 revision of the Diploma Handbook. It is advisable to agree with the trainee dates for as many meetings as possible, detailing which subject areas are to be covered in which tutorial. This allows both the tutor and the trainee the opportunity to prepare accordingly.

The tutorials are an opportunity to discuss the areas under scrutiny and flesh out the information from text books etc. It is not intended that the trainee should simply recite what they have read or for the tutor to give a lecture to an audience of one/two. Each tutorial will take between 60 and 90 minutes. It is sometimes necessary to have a double tutorial if scheduling is a challenge. There should be sufficient time allowed between tutorials to give candidates the opportunity to read and prepare for the next tutorial.

The assessment of learning is by various modalities, the KBA is almost always carried out by the tutor for that module. It is similar to a tutorial but one expects the trainee to do the talking with minimal prompting. I compose a list of points to cover in the KBA for each module as an indicator of what I expect the student to be able to talk about sensibly and as a reminder for myself. Since the Diploma is for surgeons from both Plastics and Orthopaedics one wouldn't expect in depth knowledge of arthoplasty tribology in module 4 or detailed recounting of specific, obscure flap anatomy in module 2 for example.

The KBA should take approximately 20-30 minutes. If the trainee's performance is substandard a further attempt should be arranged. If the second attempt still does not demonstrate an appropriate competence in that module then please seek advice from the Programme Director for the Hand Diploma (Chair of the Diploma Committee) via the BSSH secretariat, who will arrange for a local 'second opinion' of the trainee's knowledge base.

The other module assessments are very similar to the work based assessments used widely in modern medical postgraduate education. Clinical evaluation exercises (CEX), Case based discussion (CbD) and Direct observation of procedural skill (DOPS).

The module outline and the reading list for each module can be found in the Diploma Handbook which is available electronically from the BSSH. The reading lists have

been revised and aim to provide bite sized literature with a greater emphasis on classic papers and review articles or book chapters and other resources for each subject area.

There is a one day revision course each November (details from the BSSH secretariat) to help candidates prepare for the exam (the eighth module). This consists of example questions and mock skill stations. Candidates having difficulty completing their course work can also attend one of the booster days currently held in Derby where incomplete course work, that is well prepared for, can be completed and validated.

Entry to the exam is made via the BSSH secretariat and must be done by the deadline in January each year. Entry to the exam requires a completed logbook, including a completed DVD, review article and algorithm. No candidate with an incomplete logbook will be allowed to take the exam.

The Diploma is managed & developed by the BSSH Diploma Subcommittee, administered by the BSSH secretariat and academically endorsed by the University of Manchester. Each trainee needs a Diploma Supervisor who will co-ordinate their application, selection of module tutors and monitor progress through the programme. In addition there are two Candidate Counsellors - one for the North of the UK and one for the South - who provide a further level of support and information for trainees. The Programme Director of the Hand Diploma is also the Chair of the Diploma Subcommittee and is ultimately responsible for both the academic standards of the qualification and the executive running of the programme including the examination (Module 8). For further information or assistance please contact the BSSH secretariat:

Ms Angela Rausch
British Society for Surgery of the Hand Secretariat
The Royal College of Surgeons
35-43 Lincoln's Inn Fields
London
WC2A 3PE
Tel: 020 7831 5126, Fax: 020 7831 4041, Email: angela.rausch@bssh.ac.uk

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APPENDIX 12

POSTGRADUATE DIPLOMA IN HAND SURGERY (MODULE 8)

Marking Descriptors
0 inadequate
1 barely adequate
2 adequate
3 good
4 exceptional

	Core basic science knowledge	Core clinical knowledge	Higher order thinking	Evidence of literature review	Practical skills	Patient and colleague communication skills including taking of consent
0	Poor basic science knowledge Fails to demonstrate competency Lack of basic understanding	Incompetent to diagnose and/or manage patients causing anxiety to examiner	Unable to synthesise information and organise material Cannot prioritise Can only repeat information 'parrot fashion' Unable to get beyond the 'lead-in' questions	Unaware of relevant literature Implies literature not relevant Unaware of scientific principles and experimentation	Unable to demonstrate the particular skill required Conveys inability to conceive and design operations Contravenes important principles in practical applications Unaware of correct examination technique	Confused disoriented answers Disorganised thought process Inappropriate responses Patronising No empathy Inappropriate examination of opposite sex Unable to structure a consent episode
1	Possesses basic knowledge but with gaps that could have practical consequences	Some gaps in knowledge Potential for poor outcome for patients	Lack of understanding Difficulty in prioritising Poor deductive skills Significant errors Struggles to apply knowledge/judgment/management	Aware of key papers but not their content Fails to appreciate significance of evidence base in patient management	Hesitant Requires prompting and guidance Designs are technically incorrect and would not work Fails to elicit signs on examination	Requires frequent prompting Hesitant and indecisive No introduction Fails to observe body language Omits significant potential complications or uses technical language in explanation
2	Important areas covered Conveys a working knowledge of important areas	Competent to manage range of basic clinical problems	Methodical approach Requires minimal prompting	Able to summarise relevant literature in areas where detailed understanding specified in syllabus	Competent performance Demonstrates satisfactory examination techniques and elicits signs present	Appropriate and considerate examination technique Respectful demeanour Responsive to patients Competent consent undertaken
3	Good knowledge Sustains detailed questioning	Conveys breadth of relevant knowledge and experience Instils confidence in management plans	Reached good level of higher order thinking Able to prioritise Good understanding / knowledge/ management plans Strong interpretive skills	Able to sustain reasonable detail and breadth of literature Able to criticise previous studies Aware of controversies when prompted	Confident performance Instils confidence Practically adept in demonstrating allotted skills Refers to own experience	Gains examiner / patient confidence quickly Good rapport Talks at the right level Appropriate language depending on patient or examiner Consents appropriately including complications
4	Exemplary knowledge	Exemplary knowledge	Reached exceptional level of higher order thinking Able to challenge examiners. High flyer Exceptional interpretative skills	Able to sustain in depth consideration of literature including most recent papers Sustains a higher level discussion Points out controversies	Confident performance Inspires confidence Practically adept and performs tasks expeditiously Refers to own experience Alludes to alternative techniques	Inspires confidence in examiner / patient. Very good rapport. Communicates good deal of information rapidly and effectively. Consents and then checks patient understanding

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