SIWF ISFM FMH

Specialist in orthopaedic surgery and musculoskeletal traumatology

Postgraduate Curriculum applicable from January 1st 2013

In a Nutshell

Duration: 6 years (with all activities consigned in a Logbook)

I year of basic surgical/medical training or MD-PhD programme

5 years of Specialty training (6 months research pertaining to the musculoskeletal system may be validated, 2 years at least in Switzerland)

- 2 years Trauma
- 3 years Orthopaedic surgery

-1 year Orthopaedic Surgery mandatory in A center

-1 year Traumatology mandatory in 1 center

Operative Catalogue

- 650 (450 as the Operating Surgeon and 200 as Assistant) surgical procedures in Orthopaedics/Traumatology

Examinations

- Basic Surgery (12 months after beginning of surgical training)
- Anatomy and surgical approaches (24 months after beginning of surgical training)
- Oncology exam (12 months after beginning of surgical training)
- Paediatric Orthopaedics exam (12 months after beginning of surgical training)
- Orthopaedics and Traumatology examinations: Written and Oral (Completion of training)
- Radiology and radioprotection examinations

Courses

- ATLS (2 days)
- Basic fracture course (3 days)
- Advanced fracture or anatomy course (3 days)
- X-Ray application and Radioprotection (4 days)
  - (+ 30 supervised high dose X-Ray exams and 10 image intensifier exams)
- Insurance and medico legal course (2 days)
  - (+ Three expert evaluations performed under supervision)
- Good Clinical Practice course (1.5 days)
- Evidence Based Medicine course (1.5 days)
- Orthotics and Prosthetics course (1.5 days + 5 days in an orthopaedic workshop)
- Congress or yearly CME course of the Swiss Orthopaedic Association: 4 attendances
- 200 CME credits accrued in the 5 years of Specialty training

Publications

Author (first or last) of one article (Meta analysis, case series, original research etc. in a peer reviewed journal)

Presenter of an oral presentation or poster in a Specialist Congress or Meeting (Nat or Internat)

Specialist in orthopaedic surgery and musculoskeletal traumatology

Postgraduate curriculum

1. Overview

1.1 Definition of the Specialty

Orthopaedic surgery and musculoskeletal traumatology encompasses the whole spectrum of developmental disorders, affections and lesions of the musculoskeletal apparatus at all ages.

1.2 Goals of postgraduate training

Postgraduate training in Orthopaedics and Traumatology should allow a candidate to acquire in-depth knowledge in the domain of conditions and trauma pertaining to the musculoskeletal system and their sequels.
The patients, general practitioners, insurers and third-party payers, along with the legislator and the Swiss Society of Orthopaedics and Traumatology all expect of a Specialist competence, integrity and ethical behavior when engaged in the diagnosis, treatment and after-care of conditions or trauma of the musculoskeletal systems. Every Specialist must also be capable of recognizing that the care of rare conditions or complex lesions of the musculoskeletal system are best treated in a specialized and well-equipped center and that the patients should be referred when necessary.

2. Length, structure and complementary provisions

2.1 Length and structure of postgraduate training

2.1.1 Postgraduate training is 6 years and is structured as follows:

- 5 yrs specific training

- 1 yr of non-specific basis training

2.1.2 Specific post-graduate training

- Post-graduate training in orthopaedics:
3 yrs at least must be accomplished in centers accredited for post-graduate training and 1 year at least must be accomplished in a category A center.

- Post-graduate training in traumatology
3 yrs at least must be accomplished in centers also accredited for post-graduate training and 1 year at least must be accomplished in a category 1 center.
2 yrs at the least may be accomplished in general surgery centers recognized for specific training in traumatology (ACU1 or ACU2).

2.1.3 Basis training (non specific)
Basis training may be accomplished in the following specialties:
- anesthesiology
- general surgery
- hand surgery
- cardiothoracic and vascular surgery
- intensive care
- pediatric surgery
- maxillo-facial surgery
- neurosurgery
- neurology
- oto-rhino-laryngology
- plastic, reconstrutive and esthetic surgery
- rhumatology
- urology

2.1.4 Research activity or MD-PhD programme
In the 6 years of training it is possible to validate 1 year at most to research activity or to participation in an MD-PhD programme preferably done in the domain of the musculoskeletal system. At the most, completion of 6 months of research activity may be considered as part of specific training if it pertains to the musculoskeletal system. It is advisable to check beforehand with the Specialist Title Committee.
2.1.5 Recognition of post-graduate training completed abroad
(Article 33 of PGTR) may be validated. However, at least two years of Specific training must have been accomplished in Switzerland in recognized centers. Again, it is advisable to check beforehand with the Specialist Title Committee.
2.1.6 Full-time or part-time activity.
Possibility to accomplish the whole training while in part-time activity (Minimum 50%). (art. 32 PGTR).
2.1.7 Assisting in a private office. This is not a recognized form of post-graduate training.

2.2 Complementary provisions

2.2.1 Objectives/logbook Objectives according to chapter 3 (Below). Every candidate uses a logbook containing all the stages of the training the objectives (including courses, interventions etc). The candidate includes the logbook in the documents when applying for the Title.
2.2.2 Technical orthopaedics
- Participation in the introductory course (1 ½ day) of the Swiss Association for prosthesis and orthosis (APO) (cf. www.sgotssot.ch → www.a-p-o.ch).
- 5 days of active participation in an orthopaedic workshop recognized by the Swiss Society for Orthopaedics and Traumatology (SSOT) (cf. www.svot.ch).

2.2.3 Qualification for radiological examinations
Acquiring theoretical knowledge and technical qualifications to perform high dose radiological explorations in conformity with the decree on radioprotection including the radioprotection course recognized by the Health ministry (OFSP) (4 days; cf. annex 2 and www.radioprotection.ch).
2.2.4 Expert Evaluation Activity
- At least 3 expert evaluations (Insurance, legal) realized under supervision.

- Participation in a 2 day course recognized by the SSOT (cf. www.sgotssot.ch → postgraduate trainingand www.swiss-insurance-medicine.ch).
2.2.5 Postgraduate educational sessions and courses and CME
-Participation in recognized sessions and CME courses fora total of 200 credits (cf. annex 3), of which four events organized by the SSOT (annual congress SSOT/ One-day annual CME course).

- ATLS or equivalent (2 days), for ex. European Trauma Care Course,International Trauma Life Support.

- Participation in a basic fracture course (3 days).

- Participation in an advanced fracture course (3 days) or recognized surgical anatomy course (3 days).

- Participation in a Clinical Investigator course (Good Clinical Practice; 1 ½ days).

- Participation in an Evidence Based Medicine course (1 ½ days).

2.2.6 Publications/Scientific work: The candidate is the first or last author of an accepted for publication scientific work in a peer reviewed journal: printed or on-line open access. Original research, including meta-analysis or detailed well-referenced case-reports is accepted. The text without the references must at least contain 1000 words. The theme of the publication does not necessarily have to pertain to the domain of the Specialty title

2.2.7 Oral presentation or poster:
The candidate must have presented at least one oral presentation or poster during a Speciality congress national or international as first author and present the proof.

3. Content of postgraduate training (Objectives Catalogue)

The objectives catalogue of training constitutes an annex to the Rules of Post graduate training. It is binding for all specialities and serves as a base for the Post Graduate Training Concepts of the different training centres. The binding nature of the different objectives is determined by the log-book.

3.1 Overview

The training programme must allow the orthopaedic surgeon to acquire the knowledge and the competencies necessary to establish a diagnosis and to master the therapeutic indications, so as to correctly instate therapeutic measures, to understand prevention, to treat complications and to follow affections of development, diseases and lesions of the musculoskeletal system, as well as to triage and manage urgent situations. On this basis, the future orthopaedic surgeon will need to know how to plan long term treatments and to fix priorities, while being aware of the global and socioeconomic context. Knowledge acquired during training must make the future surgeon of his responsibilities as to continuing education so as to guarantee the quality of his delivery of care.

3.2 Knowledge base

3.2.1 Anatomy, physiology, biomechanics and pathophysiology of the musculoskeletal system of children and adults.

3.2.2 Epidemiology, etiology, pathogenesis and prognostic of the developmental affections and lesions of the musculoskeletal system.

3.2.3 Physiopathology and management of polytrauma.

3.2.4 Knowledge, interpretation and critical appreciation of diagnostic and surgical procedures in the realm of orthopaedic and trauma surgery of the musculoskeletal system.

3.2.5 Therapeutic measures and indications of surgical or conservative and pharmacological in orthopaedic surgery and traumatology along with the appropriate indications.

3.2.6 Methods of treatment in physical medicine and rehabilitation in orthopaedic sugery and traumatology and indications.

3.2.7 Prevention, diagnosis and treatment of complications after interventions in orthopaedic surgery and traumatology.

3.2.8 Knowledge of expected results after interventions in orthopaedic surgery and traumatology.

3.2.9 Prophylactic measures in orthopaedic surgery and traumatology.

3.2.10 Knowledge of the national insurance system (Social, private) and medico-legal aspects of practicing medicine and surgery.

3.2.11 Knowledge of scientific methodology and Evidence-based Medicine

3.2.12 Methods of quality assurance applied to Orthopaedic Surgery and Traumatology.

3.2.13 Biology and biomechanics of implants used in Orthopaedic Surgery and Traumatology

3.2.1 Knowledge of the indications, posology, action, interaction, undesirable effects of drugs commonly used in Orthopaedic Surgery and Traumatology. The future surgeon must have knowledge oft he legal basis of prescriptions and controls of drugs in Switzerland.

3.3 Technical skills and capabilities

3.3.1 The operative catalogue is in Annex 1. The following principles are to be applied:

- The operative capabilities are region specific and are made up of defined techniques.
- Each intervention accounts also for an anatomical region.
- Removal of hardware or surgical approaches cannot account for more than 100 interventions.

3.3.2 Closed reduction of fractures and dislocations, transosseous traction.

3.3.3 Placing casts or corrective devices on the extremities or vertebral column.

3.3.4 Mastery of investigative techniques in Emergency medicine or Orthopaedic surgery.

3.3.5 Diagnostic and therapeutic arthrocenteses, injections and percutaneous evacuations involving the musculoskeletal system.

4. Examination and Assessment

4.1 Goal of the examination

A successful examination attests that the candidate, at the completion of his training curriculum (Chap 3), is competent to independently manage patients presenting with conditions or trauma in the domain of Orthopaedic Surgery and Traumatology.

4.2 Examination material

The material under examination includes the whole of the Learning Goals Cataloque (Chap 3)

4.3 Examination Board

4.3.1 Election

The members of the examination board are elected by Swiss Orthopaedic Association Board.

4.3.2 Composition

The board is composed of 6 members representing, private practice, hospital practice and the universities. The board is presided by the chief of a University service.

4.3.3 Tasks

The Board in concert with the Expert Groups, the postgraduate education board and the University Service chiefs is responsible for the content, the format and the organisation of the Examination. The Board announces the results to the individual candidates.

4.4 Examination

The Specialist examination is composed of the Basic Surgical Examination, three intermediary examinations and an oral and a written final examination.
Each of the above examination has its specific requirements.

4.4.1 Basic General Surgery Examination

Requirements	Swiss Medical Diploma or recognized equivalent
Timeline	At the earliest 12 months after being clinically active in a surgical specialty.
Content	MCQ 150 questions, 4 hours in the domain of General Surgery

4.4.2 Intermediate Musculoskeletal Anatomy and Surgical Approaches Examination

Requirements	Successful Basic General Surgery examination.
Timeline	At the earliest 12 months after being clinically active in a surgical specialty.
Content	Demonstration of two surgical approaches out of the list defined by the Swiss Orthopaedic Association (Annex 4) Demonstration of detailed knowledge of the surgical anatomy of the musculoskeletal system. Duration 1-2 hours

4.4.3 Intermediate Examination : Musculoskeletal Tumors

Requirements	Successful Basic General Surgery examination. At the earliest 12 months after being clinically active in a surgical specialty.
Timeline	Before the final examination
Content	Online examination including theoretical knowledge of orthopaedic oncology on the basis of 6 clinical case presentations and discussions. Duration 1-2 hours

4.4.4 Intermediate Examination: Paediatric Orthopaedics

Requirements	Successful Basic General Surgery examination. At the earliest 12 months after being clinically active in a surgical specialty.
Timeline	Before the final examination
Content	Online examination including theoretical knowledge of paediatric orthopaedics on the basis of 6 clinical case presentations and discussions Duration 1-2 hours

4.4.5 Final exam part 1 (Written examination)

Requirements	- Successful examinations: Basic General Surgery examination. Anatomy and musculoskeletal surgical approaches Musculoskeletal Tumors Paediatric Orthopaedics

	- 90% of the operative catalogue
Timeline	Earliest 24 months after successfully passing the Anatomy examination
Content	Whole domain of the specialty of Orthopaedic Surgery and Traumatology 150 MCQ. Duration: 4 hours

4.4.5 Final exam part 2 (Oral examination)

Requirements	Successful Part 1 examination
Timeline	At the earliest 24 Months after the successful Anatomy examination
Content	Case-Discussion based on two orthopaedic cases and two trauma cases with the Patients records and imagery

4.5 Examination Modalities

4.5.1 Time and place of the examinations

All parts of the examination are held at least once a year. The location and dates are published 6 months before in the Swiss Medical Journal (SÄZ).

4.5.2 Language

The oral and written exams are held either in French or in German. The candidate announces the language of preference. Italian is allowed as long as the candidate and the examiners are in agreement.

4.5.3 Examination fees

The fees of the final examination are fixed by the FMCH and published in the Swiss Medical Journal (SÄZ).

The fees of the intermediate exams are announced in the Swiss Medical Journal (SÄZ) and fixed by the Board of the Swiss Orthopaedic Association.

4.5.4 Protokoll

All examinations, whether oral or written, are documented by a written protocol. A recording may be performed in the case of oral examinations. In case of a failed examination, recordings must be checked immediately and a written protocol established.

4.6 Evaluation Criteria

The evaluation criteria are determined by the Examination Board. All parts of the exam are evaluated as “passed” or “failed”. The Specialty examination is passed when all of its parts have been successfully passed.

4.7 Repeat of the examination and opposition

4.7.1 Announcement of results

All results are announced in written form.

4.7.2 Repetition

All parts of the examination may be re-passed separately and as often as necessary.

4.7.3 Opposition

In case of failure the candidate may have recourse in writing to the Opposition Committee (EK WBT, art.27 WBO) within 60 days after receiving written notice of the negative result.

5. Criteria for the recognition and classification of Postgraduate Training Centers (PTC)

5.1 Requirements for all PCTs

- The recognized PTCs are headed by a physician carrying the title of Specialist in Orthopaedic Surgery and Traumatology or equivalent (Art. 39 Abs.2 WBO).
- The Head is responsible for the complying with the prescribed training programme.
- The Head complies with his CME requirements (Art. 39 WBO).
- A postgraduate training concept is available documenting and describing in a structured the training programme (Art. 41 WBO). The concept needs to be realistic and must mention the maximal number of trainees possible. The concept describes the attainable goals within one year achievable by trainees both for the specific Specialty and of optional years in another Specialty. The logbook must be used and emphasis must be given to themes of the general programme including ethics, patient security, socio-economics of medicine, pharmacotherapy, and quality assurance (Art. 16 WBO).
- Each trainee is assessed and evaluated four times a year.
- Each PTC has an established critical incident reporting system (CIRS) and uses patient safety checklists.
- At least three of the following journals are available to the trainees either online or in print: *J Bone Joint Surg, Bone Joint J, Clin Orthop Rel Res, J Orthop Res, Am J Sports Med, J Arthroplasty, Spine, J Shoulder Elbow Surg, Arthroscopy, Foot Ankle Int.* Computers and Internet access must be available at the workplace. The ordering of articles and books must possible. Trainees must be provided with 6 working days per year to attend courses, congresses and examinations outside of the workplace (ch. 2.1 – 2.4).

5.2 Categories of PTCs

Three categories of PTCs are recognized for Orthopaedic Surgery: (Categories A, B and C) and 2 Categories of PTCs are recognized for Traumatology (Categories 1 and 2), the PTCs recognized as trauma training centers in general surgical services are categorized as ACU1 and ACU2, equivalent to Traumatology Categories 1 and 2.

Maximal recognized periods of training:
Category A: 3 Years Orthopaedics
Category B: 2 Years Orthopaedics
Category C: 1 Year Orthopaedics

Category 1 or ACU1: 2 Years Traumatology
Category 2 or ACU2: 1 Year Traumatology

Orthopaedic Surgery				
Criteria	Factors	Category		
		A	B	C
Duration	Maximal number of years	3	2	1
Criteria 1 Medical Team	fulltime Head Head Academic title Consultants (Without the Head) Cat. C: not necessary for Rehab Services Chief Registrars [a)] Training positions 100%	+ + 3 5 8	+ - 2 3 4	+ - 1 0 1
Criteria 2 Service organization	Team system with Subspecialty organ or technique specific; Consultant as Team leader	+	-	-
Criteria 3 Spectrum of treatment [b)] with competence in:	(1) Spine surgery (2) Pelvis and hip (3) Knee (4) Foot and Ankle (5) Shoulder and elbow (6) Hand [c)] (7) Tumor [d)] (8) Paediatric [c)]	7 of 8 domains	4 of 8 domains	1 of 8 domains
Criteria 4 Surgical Volume	Number of operated patients (without trauma) For Category C (Rehab): 100 orthotic or prosthetic treatments per year	2'000	1'200	500
Criteria 5 Ambulatory care	Consultations per Year	10'000	5'000	1'000
Criterium 6 Teaching	Theoretical teaching (Hours/week) Daily X-ray report	2 +	2 +	2 -

a) A Chief Registrar (Oberarzt) is defined as a physician carrying the Title of Specialist in Orthopaedic Surgery and Traumatology (or within 1 year of the Title) practicing and teaching under the responsibility of the Head of the PTC but may operate independently. The position is limited in time.

b) Spectrum of treatment: A team structure is recommended and the team leader must perform at least 80% of the elective surgery in the domain. For Hand surgery the team leader must carry the title of Specialist in Hand surgery.

c) If the Hand or the Paediatric Orthopaedics Services are not part of the PTC a written agreement must exist, permitting rotations of trainees (fulltime 100% positions) within these services.

d) Tumor Surgery training may be acquired in a collaborative Center or Institution specialized in tumors and functioning with an official Tumor Board.

Musculoskeletal Traumatology			
Criteria	Fators	Category	
		1	2
Length	Maximal (Months)	24	12
Criteria 1 Recognition	ABC recognized PTC	+	+
Criteria 2 Infrastructure	24h Emergency Services Intensive care SGI recognized) Polytrauma :ISS>16 >10/Year	+ + +	+ - -
Criteria 3 Surgical volume/ Emergency services	Operated Patients per year Traumatology-Emergency Service	600 At least 3 days/week, Alternatively Trauma/Ortho Services Orthopaedic Service numbers only may be reported	250 Participation

6. Transitional provisions

The present post-graduate training programme has been put in place and is in force starting the 1.1.2013.

Candidates accomplishing their Post-Graduate Training programme before 31.12.2017 exclusive of the final examination will need to satisfy prerequisites of the 2006 version of the Training Programme.

Annexes

- Annex 1: Operative catalogue
- Annex 2: Radioprotection and Radiology
- Annex 3: CME credits

Annex 1
Operative Catalogue

Part 1 Prosthetics			Requirements		
Group	**Anatomic Region**	**Technique**	**minimal**	**maximal valida-tion[1]**	**Assis-tance[2]**
			30	**90**	**30**
1	Hip	Primary total prosthesis all systems and techniques	**20**	**60**	**30**
	Knee	Primary total prosthesis all systems and techniques incl. unicompartmental			
	Shoulder	Primary total prosthesis all systems and techniques incl. reverse prosthesis			
	Spine	Disc prosthesis all systems and techniques			
2	Elbow Hand Wrist Fingers Ankles Toes	Primary prosthesis all systems and techniques	**0**	**10**	
3	Hip	Hemi	**0**	**10**	
	Knee	Secondary patella prosthesis Patellar prosthesis Femoro-patellar Prosthesis			
	Shoulder	Hemi			
4	all Regions	Prosthesis revision Prosthesis conversion - Hemi to Total - Standard to Inverse Prosthesis Prosthesis excision, Girdlestone with Spacer Spacer revision Prosthesis reimplantation	**1**	**10**	

[1] maximal number that may be validated
[2] Only 1st assistant for Hand surgical interventions may be validated

Part 2 Osteotomies and Arthrodeses			Requirements		
Group	**Anatomic Region**	**Technique**	**minimal**	**maximal validation[1]**	**Assistance[2]**
			15	**50**	**15**
1	Pelvis	Periacetabular Osteotomy Triple-Osteotomy Salter, Pemberton	**0**	**20**	**15**
	Femur	intertrochanteric Osteotomy alle corrections			
2	Femur distal Tibia proximal	Axis correction around the knee all corrections and techniques	**3**	**10**	
	all except Hand, Foot	Corrective-Osteotomies for all deformities of any origin.			
3	Hand, Foot	Corrective-Osteotomies Osteotomies forefoot	**5**	**10**	
4	all	Arthrodeses all Techniques	**1**	**10**	

Part 3 Reconstructive Procedures, Arthroscopy			Requirements		
Group	**Anatomical Region**	**Technique**	**minimal**	**maximal validation[1]**	**Assistance[2]**
			70	**140**	**70**
1	Spine	Laminectomy Herniated disc Spondylodesis Correction scoliosis, kyphosis	**10**	**40**	**70**
	Hip	Femoro-acetabular impingement Epiphysiolysis			
	Knee	Anterior cruciate reconstruction Posterior cruciate reconstruction, Meniscus suture Patellar-Maltracking			
	Shoulder	Rotator cuff tear suture Rotator cuff tear reconstruction Shoulder stabilisation (Gleno-humeral, AC-Joint)			

[1] maximal number that may be validated
[2] Only 1st assistant for Hand surgical interventions may be validated

Group	Anatomical Region	Technique	minimal	maximal validation[1]	Assistance[2]
			70	**140**	**70**
2	Knee	Meniscectomy Cartilage reconstruction, Microfracture Suture/ Reconstruction extensor-apparatus	**30**	**60**	
	Foot	Tendon surgery Ankle instability Forefoot deformities Ganglion Exostosis			
	Shoulder	Acromioplasty, AC-Resection subacromial decompression Biceps tendon surgery			
	Elbow	Ligament suture or reconstruction, Epicondylitis			
	Wrist, Hand	Ligament surgery Tendon surgery TFCC Dupuytren Ganglion			
3	All regions	Free flaps Rotation flaps Skin transplantation	**5**	**40**	
4	**All regions**	**Arthroscopic interventions**	**40**	**60**	

Part 4 Internal Fixation	Requirements		
	minimal	maximal validation[1]	assistance[2]
All Groups together	**65**	**240**	**65**

Diaphyseal-metaphyseal fractures AO-Classification: Segment 2, Segment 1 and 3 only Group A					
Group	**Anatomical Region**	**Technique**	**minimal**	**maximal validation[1]**	**assistance[2]**
			30	**110**	**30**
1	Femur	Plate, Nail, External Fixateur	**20**	**70**	**30**
	Tibia	Plate, Nail, External Fixateur			
	Humerus	Plate, Nail, External Fixateur			
	Radius, Ulna	Plate, Nail, External Fixateur			
2	Clavicle, Scapula	Plate, Nail, External Fixateur	**10**	**40**	
	AC-dislocation SC-dislocation	All fixation techniques			
	Hand: MC, P1, P2	All fixation techniques			
	Foot: MT, P1, P2	All fixation techniques			

Articular Fractures AO-Classification: Segment 1 and 3 only Groups B and C					
Group	**Anatomical Region**	**Technique**	**minimal**	**maximal validation[1]**	**assistance[2]**
			30	**110**	**30**
3	Femur	All fixation techniques	**20**	**70**	**30**
	Patella	All fixation techniques			
	Tibia	All fixation techniques			
	Glenoid	All fixation techniques			
	Humerus	All fixation techniques			
	Radius	All fixation techniques			
	Ulna	All fixation techniques			
4	Malleolar fracture	All fixation techniques	**10**	**40**	
	Midfoot, foot	All fixation techniques			
	Wrist Hand	All fixation techniques			

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Axial skeleton Acetabulum, Pelvic ring, Spine all fracture types					
Group	**Anatomical Region**	**Technique**	**minimal**	**maximal validation[1]**	**assistance[2]**
			5	**20**	**5**
5	Acetabulum Pelvic ring	all Fixation techniques incl. C-Clamp, Ext Fix.	**2**	**20**	**5**
	Spine	all Fixation techniques Vertebral body replacement Vertebro-, Kyphoplasty			

Implants					
	Anatomical Region	**Technique**	**minimal**	**maximal validation[1]**	**assistance[2]**
	All	**Nail**	**10**		
	All	**Plate**	**20**		
	All	**Fixateur externe, K-wire**	**10**		
Part 5 Miscellaneous			**Requirements**		
Group	**Anatomical Region**	**Technique**	**minimal**	**maximal validation[1]**	**assistance[2]**
			15	**260**	**20**
1	All regions	Excision malignant Tumor	**0**	**30**	**20**
		Excision benign Tumor			
		Bone metastasis			
		Biopsy			
2	All regions Articular Soft tissues Bone	Infection/Osteomyelitis Debridement, lavage, arthroscopic lavage etc.	**5**	**20**	
3	Elbow	Ulnar nerve transposition	**5**	**50**	
	Hand	Median, Ulnar nerves decompression			
	Foot	Tibial nerve decompression			
	All regions	Nerve suture, -reconstruction			
4	All regions	Bone: Non-union management, Bone graft (Iliac crest etc)	**5**	**10** **20**	
		Soft tissues: Compartment fasciotomy, Bursectomie		**20**	
		Amputation		**10**	
5	All regions	All approaches (Catalogue)		**100**	

[1] maximal number that may be validated
[2] Only 1st assistant for Hand surgical interventions may be validated

Partial domains	**minimal**	**maximal validation[1]**	**assistance[2]**
Prosthetics	30	90	30
Osteotomies and Arthrodeses	15	50	15
Reconstructive procedures	70	140	70
Internal Fixation	65	240	65
Miscellaneous	20	260	20
Intermediate total	200	780	
Minimal numbers of procedures	**450**		**200**

Complementary criteria relative to anatomical regions

Anatomical Region	Surgeon
Acetabulum, pelvic ring, spine	**2**
Shoulder girdle (Clavicle, Scapula, AC- and SC-Joint)	**5**
Shoulder	**10**
Humerus, arm	**5**
Elbow	**10**
Radius-Ulna, forearm,	**10**
Carpus, wrist,	**20**
Hand MC, P1-3	**20**
Hand MC, P1-3	
Hip	**15**
Femur, thigh	**10**
Knee	**30**
Tibia, leg	**10**
Tibio-talar, talo-calcaneal, tarsus	**10**
Foot MT, P1-3	**15**
Foot MT, P1-3	
Total	**175**

incl. diaphyseal-metaphyseal fractures	***AO-Classification*** - ***Segment 2*** - ***Segment 1 + 3 only Group A***
incl. articular fractures	***AO-Classification*** - ***Segment 1 + 3 only Group B + C***
- **One anatomical region can be counted only once per patient** - **Bilateral operations may be counted twice**	

[1] maximal number that may be validated
[2] Only 1st assistant for Hand surgical interventions may be validated

Annex 2
Radioprotection and X-Ray applications

1. Overview

- For the implementation of dose-intensive diagnostic X-ray examinations Art 11 para 2 of the Radiation Protection Ordinance requires appropriate training. Every future specialist in "orthopedic surgery and traumatology," needs to gain, during the training period, the necessary expertise for conventional diagnostic radiology in the low dose range for the skeleton of the limbs and the ribs, and for dose-intensive examinations of the pelvis and axial skeleton and for interventional diagnostic investigations necessitating the acquisition of an image intensifier.
- The provisions regarding dose-intensive examinations are based on the current technical possibilities (1998).

2. Conditions

- The applicant must complete a course organized under the auspices of the Health Ministry and successfully pass the required examination in order to engage in the use X-ray equipment under his own responsibility.

3. Course content

Theoretical knowledge

a) Radioprotection: The goal is protection of the individual and of the population
   - Knowledge of risks and optimal use of radiation.
   - Knowledge of sources of radiation
   - Knowledge of the basic principles of radioprotection
   - Knowledge of dosimetry / including surface dose calculation
   - Knowledge of radiation use and indications
   - Knowledge of dose limits

b) Specialty knowledge:
   - Knowledge of the radiological anatomy of the skeleton: Extremities, pelvis and spine
   - Knowledge of the radiology of all conditions affecting the skeleton

Practical Education

- Correct technique and positioning
- Implementation and interpretation of lower (extremities) and higher (Spine, pelvis) dosage examinations along with the prudent use of an image-intensifier.

Number of necessary radiological examinations (Indicative)

a) High dosage: 30 examinations
   Spine/pelvis

b) Interventional (Image intensifier): 10 examinations: Fracture reduction (open or closed), foreign body search, joint injections, Implant controls, pedicle localization, locked nailing.

4. Execution

- During his training period the trainee must perform and interpret the required radiological examinations on real patients with an ad hoc indication and under the supervision of a trainer
- This practical knowledge will be tested at the end of the theoretical courses.

5. Training Centers for Radiology

a) PTC with a recognized radiological service headed by a Specialist in Radiology
b) The same conditions apply to a surgical training center
c) Radiological Institutes independent or affiliated to a hospital or university lead by a Specialist in Radiology may host supervised trainees.
d) The trainer must:
   - A Specialist in Radiology
   - A Specialist in Orthopaedic Surgery and Traumatology having successfully passed the radiology course and examination and having at least three years practice in the use of an image intensifier.
   - A Specialist in Surgery with the same conditions.

Annex 3
Credit points attributed to CME sessions

When submitting the request for the obtention of a Specialist title recognition the trainee must attest to the attendance of courses, meetings, congresses or educational courses held outside the PTC in which he is training. Only recognized educational events may be validated.

As a rule the events announced in the Swiss Orthopaedic Association Calender are recognized (www.sgotsso.ch).

Principles of accreditation	**Credits**
Swiss Orthopaedic Association events	
Annual congress	20
Training course (Maximal credits per day)	10 25
International meetings	
Large multi-day general international meetings (AAOS, EFORT etc)	20
Large national or international congresses of specialty Societies - Complete meeting maximal - per day - per ½ day	 20 8 4
Courses, Seminars, Symposia etc with Orthopaedic or Trauma themes (Monosponsored meetings excluded)	
AO-Course and other Fracture courses	5 / Day
Swiss and international meetings and events - 2 days and more - 1 Day - ½ Day	 16 8 4
Lectures and meetings in PCTs (per Hour)	1

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