

In the Name of God

**Islamic Republic of Iran
Ministry of Health and Medical Education
Deputy for Education**

**Hand Surgery
Degree: Fellowship**

Program Description

The hand is an important organ which plays an unchallenged role in humans' everyday life for doing fine and artistic works, self-defense, force needing works and dealing with complex technical issues, and also facilitating environmental communication skills. Congenital and acquired hand disorders impose many physical and mental damages to individuals, their families and ultimately society. Experts of various specialized disciplines including orthopedics, plastic surgery, reconstructive and burn, vascular surgery disciplines and general surgeons can help patients whose hands have been damaged and restore the injured hand to the normal condition. The importance of the hand has led the world's well known medical universities to consider the establishment of hand surgery fellowship for a long time. As Islamic republic of Iran is became competent in training fellows supervised by experienced professors in Hand Surgery, a committee was formed of active members of Iran's universities in 2009 to develop a joint curriculum by unifying current curricula and developing a national curriculum for this Training Program. After searching the literature and curricula in the world and using the experiences of local experts, this committee developed the current curriculum and issued it to the executing universities after the legal processes. This committee welcomes academia's and experts' comments to use in next revision of the curriculum.

Definition and Duration of the Training Program:

The operation domain of a hand surgeon in this curriculum is from the fingertips to the brachial plexus. It is clear that, if necessary, operations should be done as teamwork and a vascular surgeon, a shoulder fellow or even a thorax subspecialist could be involved.

It is a branch of surgery which is about repairing injuries to tendons, peripheral nerves, brachial plexus, vessels, muscles and soft tissues and bones which are caused by diseases, trauma, congenital anomalies, tumors, burns, joint rheumatic diseases, infections and sports injuries by using surgical and non-surgical procedures, such as arthroscopy, arthroplasty, reconstruction of tendon and muscle, local and free flaps, microsurgery and hand transplant.

Duration of this fellowship is 18 months.

Aims:

1- To train knowledgeable, efficient, competent and liable experts in the specialized field of hand surgery to provide the society with their expertise in educational and research fields and diagnostic medical services.

2- We will be one of top in the Middle East and will be prominent in the world in the next ten years in terms of educational standards and specialized service provision and science production in hand surgeries.

Admission Requirements

Expected Competencies at the End of the Program General Competencies*

Specific Competencies and Skills

Procedural Skills

- Wound care
- Using surgical microscope
- Dissection of cadaver limbs
- Microvascular anastomosis in animal lab
- Nerve repair in animal lab
- Repair of flexor tendon in zone II
- Repair of flexor tendon in other zones
- Extensor tendon repair in all zones
- End-to-end peripheral nerve repair
- Cable graft peripheral nerve repair
- Microvascular injury repair with or without vein graft
- Tendon transfer in peripheral nerve injuries
- Tendon transfer in spastic hand treatment
- Tendon transfer in paralytic hand treatment
- Finger replantation
- Upper extremity replantation at different levels
- Toe-to-finger transfer
- Thumb reconstruction
- Adult brachial plexus injury repair
- Children brachial plexus injury repair
- Adult brachial plexus delayed injury repair
- Children brachial plexus delayed injury repair
- Free skin flaps
- Free muscle flaps
- Congenital hand disease surgery
- Surgical treatment of flexion contracture
- Surgical treatment of extension contracture
- Surgery for carpal tunnel syndrome (CTS)
- Surgery for cubital tunnel syndrome
- Surgery for benign upper extremity tumors
- Surgery for malignant upper extremity tumors
- Nail injury repair
- Surgery for thoracic outlet syndrome
- Surgery for hand infections
- Surgery for acute hand burn injuries
- Surgery for chronic hand burn injuries
- Treatment of fractures and dislocations of metacarpals and phalanges (open and closed)
- Treatment of fractures and dislocations of the wrist bones (open and closed)
- Treatment of fractures and dislocations of the distal radioulnar joint
- Treatment of forearm fractures
- Surgery for acute compartment syndrome (fasciotomy)
- Surgery for chronic compartment syndrome- volkmann's ischemia
- Surgery for contracture department- Dupuytren's syndrome
- Upper extremity amputation at different levels

Splint
Tenolysis
Fingers reconstruction
Two-stage reconstruction of flexor tendons
Phalangeal and metacarpal osteotomy
Mini-plate hand surgery
Repair and reconstruction of thumb and finger ligaments
Arthroplasty -Carpo metacarpal joints (CMC)
Z-plasty, W-plasty
Artificial (silicone) joint implant
Performing nonvascularized hand bone grafts
Performing vascularized hand bone grafts
Skin grafting
Reconstruction of soft and hard tissue defects in upper extremity
Artificial joint replacement of hand & elbow
Surgery for rheumatoid arthritis complications in the upper extremity
Free tissue transfer to improve function of hands and fingers
Arthroscopy of wrist

Educational Strategies, Methods and Techniques*

Student Assessment (Methods and Types)

A. Assessment Methods

Written tests to assess theoretical knowledge
Continuous assessments of communication and practical skills using DOPS- in the ambulatory ward and operating rooms fields
Resident's portfolio assessment including log book, the results of assessments such as DOPS, articles and rewards

B. Periods of assessment

1. Continuous assessment
2. Six month assessments
3. Final assessment

Ethical Considerations*

*Note: The related document(s) can be found at <http://hcmep.behdasht.gov.ir/>.

The overall structure of the course:

Department, unit or educational setting	Content	Duration (months)
Orthopedics, plastic and reconstructive hand surgery department	Stabilizing patients admitted to the ward, visiting inpatients, participating in medical consultation, participating in educational, research, diagnostic medical programs according to the department's schedule	During the course – every day
Microscopic surgery lab	Preparing laboratory animals for surgery, observing, assisting or performing surgery independently on laboratory animals	During the course – a day per week
Hand surgery operating room	Preparing patients for surgery, observing, assisting or performing hand surgery independently, patients' care during and after surgery	During the course – two days per week
Specialized or joint clinic	Visiting and follow up of patients	During the course – two days per week
Optional	Tasks related to the selected department	Two months

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