

List of learning objectives for the first part examination in surgery

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Introduction

1. *Basic principles*

Basic general surgical knowledge, especially of pathophysiology and anatomy, is an undisputed requirement for the competent and responsible work of all doctors who practise surgery. Consequently, acquisition and evaluation of basic surgical knowledge form an important and qualifying part of higher surgical training. All surgical societies that have joined the Union have included the examination of basic knowledge (the basic examination in surgery) as an obligatory component in their higher training programmes.

The definition and scope of basic knowledge vary according to the vantage point. The board of examiners has therefore not only defined general examination aims for the basic examination but has also drawn up a detailed and specific list of learning objectives, as required in the FMH manual 'Kompetent prüfen [Competent examining]'¹. The board was guided by the description of the examination contents² of the American Board of Surgery in the US and the Royal College of Surgeons³ in England.

2. *Purpose*

The list of learning objectives should serve as a guide to trainers in surgical clinics and departments as to what knowledge higher surgical trainees should acquire and what knowledge they should have. For the trainees, the list describes the theoretical knowledge expected of them as doctors practising surgery. Self-directed learning becomes possible thereby. Surgical trainees should be given the necessary freedom and adequate opportunities.

3. *Starting point*

Higher training builds on basic education. Theoretical knowledge, in particular, should be extended and deepened. It is therefore obvious to start from the Swiss list of learning objectives⁴ for basic education, which is based closely on the Dutch list of learning objectives⁵. Many learning objectives in the present list are therefore largely identical with the undergraduate learning objectives. However, the criteria that guide the learning objectives focus on work in surgery. This results in deepening of knowledge, especially as regards the doctor's practice. Accordingly, the learning objectives of the medical undergraduate course now required for practical surgical work, were also included.

The following criteria were defined, at least one of which must be met for a learning objective to be included in the list:

- Is it a **common, important** or **dangerous condition** (incl. emergency situation) or **problem**?
- Is it an important **diagnostic** or **therapeutic** technique or method in surgery or anaesthesiology?
- Is it an **important method or technique in emergency care**?

4. Structure

The taxonomic (cognitive, practical) requirements were specified for each included learning objective. Only two levels were distinguished:

- 1: **Recognition** of competence, disease conditions and normal states as a function of age, i.e., to identify or describe the clinical condition.
- 2: Competence to **deal with the problems**, i.e., for example, to analyse a disease condition, list possible treatments, suggest prophylactic measures, etc.

For each problem (or underlying problem or disease condition) the competences required from the medical action process are stated. These competences are abbreviated using the letters:

- D** Diagnostic and investigation methods, techniques
- E** Emergency measures, monitoring
- T** Treatment: therapy and management, pre- and postoperative treatment, operative and conservative treatment techniques, prophylactic measures
- A** Anatomy: describes healthy and diseased body structures
- P** Pathophysiology: describes healthy and diseased function of the body and its organs and disease aetiology

5. References

- 1 *IAWF, Institut für Aus-, Weiter- und Fortbildung, Medizinische Fakultät Universität Bern.* Kompetent prüfen. Handbuch zur Planung, Durchführung und Auswertung von Facharztprüfungen. Im Auftrag der Verbindung der Schweizer Ärzte FMH, Österreichischen Ärztekammer ÖÄK, Bern/Vienna 1999.
- 2 *The American Board of Surgery:* The qualifying examination, Instruction to examinees, Philadelphia, 1999.
- 3 *The Royal College of Surgeons of England.* The MRCS examination, London 1999.
- 4 *Baer HU, Büchler M, Gillet M, Givel J-Cl, Harder F, Morel Ph, Peter R, Rothenbühler J-M, Röthlin M, Trentz O (eds.)* Schweizerischer Lernzielkatalog Chirurgie. Wissen und Fertigkeiten. Bern, 1999.
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1 THE BODY AS A WHOLE

A Organs and functions

01	The healthy person and his important organs and functions	2			A	P
02	Electrolytes, water balance	2	D	T		P
03	Acid-base metabolism	2	D	T		P
04	Blood replacement, blood transfusions	2	D	T	E	P
05	Clotting abnormalities, thromboembolism, anticoagulation thrombosis prophylaxis	2	D	T	E	P
06	Nutrition	2		T		P

B Wound and fracture healing

01	Wound character, wound infections, débridement	2	D	T	E	P
02	Wound abscess	2	D	T		
03	Incisional hernia	2	D	T	E	P
04	Pseudarthrosis	2	D	T		P
05	Sudeck's atrophy	2	D			

C Transplantation and immunology

01	Auto-, iso-, allo- and xenograft transplantation	1				P
02	Organ transplantation (donor and patient selection, principles of transplantation)	1	D	T		P
03	Immunodeficiency	1	D	T		
04	Immunosuppression	1	D	T		

D Oncology

01	Basic aspects of oncology	2	D	T		
02	High-risk groups	1	D			

2 Emergency, Critical Care, Polytrauma, Infections, Anaesthesiology

A *Emergency, critical care*

01	Respiratory arrest, intubation, resuscitation	2	D	T	E	P
02	Shock (hypovolaemic, septic, burns, psychogenic, posttraumatic, cardiogenic shock)	2	D	T	E	P
03	Polytrauma, assessment of consciousness (ISS, Glasgow coma scale)	2	D	T	E	
04	Trauma: assessment of injuries, haemostasis, dressings	2	D	T	E	
05	Postoperative complications	2	D	T	E	P

B *Inflammation and infection*

01	Surgical infections	2	D	T	E	P
02	Sepsis / bacteraemia	2	D	T	E	P
03	Tetanus	2	D	T		
04	Fasciitis	2	D	T		
05	Myositis	1				
06	Gangrene	2	D	T		
07	Gas gangrene	2	D		E	
08	Bite wounds	2	D	T	E	
09	Acute osteomyelitis	2	D	T	E	P
10	Antibiotics: indications etc.	2		T	E	

C *Catastrophe medicine, mass casualties*

01	Medical risks with catastrophes	1	D			
02	Principles of triage	2	D	T	E	
03	Major traffic accident (road, rail, aeroplane)	2	D	T	E	
04	Psychiatry / psychology with catastrophes	1	D			
05	Nuclear accident	1	D		E	
06	Chemical accident	1	D		E	
07	Burns	2	D	T	E	P
08	Special injury patterns (avalanches, landslides, earthquake, flooding, large fires, frostbite, crush injuries)	1	D		E	P
09	Fixation	2	D	T	E	A
10	Pain relief	2	D	T	E	P
11	Poisoning	1	D	T		
12	Epidemiological catastrophe with infectious diseases	1	D	T	E	
13	Cold injuries	2	D	T	E	

D Anaesthesiology

01	Risk assessment before operation	2	D	T		P
02	Preparing the patient for anaesthesia	2	D	T		
03	Premedication	2		T		
04	Anaesthetic drugs (inhalation and injection anaesthetics), mode of action of anaesthetics, anaesthesia induction, opioids, drugs to reverse opioids, muscle relaxants	2	D		E	P
05	General anaesthesia methods	2				P
06	Local and regional anaesthesia	2		T	E	P
07	Vascular accesses	2		T	E	A
08	Securing the airway, artificial ventilation	2		T	E	A
09	Basic cardiopulmonary resuscitation measures	2	D	T	E	P
10	Expanded cardiopulmonary resuscitation measures	2			E	P
11	Non-invasive and invasive monitoring	1		T		
12	Risks and complications	2	D	T	E	
13	Postoperative monitoring period incl. pain therapy	2	D	T	E	

3 Traumatology, orthopaedics

A Skin and soft tissues

01	Decubitus ulcers	2	D	T		P
02	Radiation ulcer	1	D			
03	Ulcers due to specific infections	1	D	T		P
04	Arterial and venous ulcers	2	D	T		P
05	Furuncles	2	D	T		
06	Carbuncles	2	D	T		
07	Erysipelas	2	D	T		
08	Paronychia	2	D	T		
09	Tenosynovitis	2	D	T		A
10	Hand infections	2	D	T	E	A P
11	Verruca vulgaris and plantaris	2	D	T		
12	Corns	2	D	T		
13	Naevus	2	D	T		
14	Haemangioma, angioma	1	D	T		
15	Fibroma, pedunculated fibroma	2	D	T		
16	Lipoma	2	D	T		

17	Pilonidal cyst	2	D	T			
18	Sebaceous cyst	2	D	T			
19	Hidradenitis	2	D	T			
20	Basal cell carcinoma	2	D	T			
21	Squamous cell carcinoma	2	D	T			
22	Spindle cell carcinoma	2	D	T			
23	Malignant melanoma	2	D	T			
24	Soft tissue sarcoma	2	D				
25	Soft tissue injury	2	D	T	E		
26	Crush syndrome	2	D	T	E		P
27	Haematoma	2	D	T			
28	Hypertrophic scars	2	D	T			
29	Compartment syndrome	2	D	T	E	A	P
30	Burns	2	D	T	E		
31	Frostbite, cold shock	2	D	T	E		
32	Injuries due to electric current	2	D	T	E		
33	Injuries due to chemicals, acid burns	1	D	T	E		
34	Injuries due to radiation	1	D	T	E		

B Disorders of the musculoskeletal system

01	Rickets, osteomalacia	1	D				
02	Osteoporosis	2	D	T			
03	Paget's disease	1	D				
04	Physical stress	2	D	T			
05	Aseptic necrosis of bone	2	D				
06	Arthritis	2	D	T			
07	Excessive joint mobility	2	D				
08	Epiphyseal loosening, slipped epiphysis	2	D	T			
09	Injury of the joint cartilage	2	D	T			
10	Injury of the joint capsule	2	D	T			
11	Ganglion	2	D	T			
12	Primary bone tumours	1	D				
13	Bone metastases	2	D	T			
14	Pathological fracture	2	D		E		
15	Amputation	2	D		E		

C Degenerative joint diseases

01	Deforming arthrosis	2	D	T			P
02	Rheumatic polyarthritis	1	D				
03	Ankylosing spondylarthritis	1	D	T			

D Neck, shoulder girdle and upper extremities

01	Shoulder fractures	2	D	T	E	A	
02	Shoulder dislocations	2	D	T	E	A	
03	Ligament injuries of the shoulder	2	D	T		A	
04	Shoulder instability	2	D	T			
05	Madelung's deformity	1	D				
06	Frozen shoulder	2	D	T			P
07	Clavicle fracture	2	D	T		A	
08	Humerus fracture	2	D	T	E	A	
09	Radius and ulna fracture	2	D	T	E	A	
10	Fractures and capsule, tendon and ligament injuries of the elbow	2	D	T	E	A	
11	Fractures and capsule, tendon and ligament injuries of the wrist	2	D		E	A	
12	Fractures and capsule, tendon and ligament injuries of the fingers	2	D	T	E	A	
13	Lateral epicondylitis (tennis elbow)	2	D	T			
14	Progressive finger inflammation after injury	2	D	T	E		
15	Olecranon bursitis	2	D	T			
16	Carpal tunnel syndrome	2	D	T			P
17	Finger tendon injuries, e.g., boutonniere deformity	2	D	T		A	
18	Dupuytren's contracture	2	D	T			
19	Nail loss	2	D	T			
20	Subungual haematoma	2	D	T	E		
21	Subungual melanoma	2	D	T			
22	Pyogenic flexor tenosynovitis	2	D	T	E	A	

E Spine

01	Spina bifida	1	D				
02	Scheuermann's disease	2	D				
03	Scoliosis	2	D				
04	Kyphosis	1	D				
05	Lordosis	1	D				
06	Spondyloarthritis, spondylosis	2	D				
07	Spondylitis, spondylodiscitis	2	D	T			
08	Herniated disc	2	D		E	A	
09	Spondylolisthesis	1	D				
10	Spondylolysis	1	D				
11	Secondary metastases	2	D				
12	Pathological fractures	2	D	T			
13	Fractures and dislocations of the spine	1	D	T	E		
14	Transection injury	1	D	T	E		
15	Spinal canal stenosis	1	D	T			

F Pelvis and lower extremities

01	Congenital hip dysplasia, hip dislocation	1	D				
02	Perthes' disease	1	D				
03	Osgood-Schlatter disease	1	D				
04	Femoral head necrosis	2	D	T			
05	Intermittent hip arthritis	1	D				
06	Pelvic fractures	2	D	T	E	A	
07	Hip fractures	2	D	T	E	A	
08	Hip arthritis	1	D	T			
09	Femoral fractures	2	D	T	E	A	
10	Fractures and capsule, tendon and ligament injuries of the knee	2	D	T	E	A	
11	Injuries of the medial and lateral meniscus	2	D	T			
12	Abnormal patellar cartilage	2	D				
13	Genu varum, genu valgum	2	D				
14	Osteochondritis dissecans	2	D	T			
15	Knee osteoarthritis	2	D	T	E		
16	Patellar dislocation	2	D	T	E		
17	Prepatellar bursitis	2	D	T			
18	Tibia fractures	2	D	T	E	A	
19	Fibula fractures	2	D	T	E	A	
20	Fractures and capsule, tendon and ligament injuries of the ankle	2	D	T	E	A	
21	Achilles tendon inflammation	2	D	T			
22	Achilles tendon rupture	2	D	T	E		
23	Tarsal tunnel syndrome	1	D				
24	Ankle instability	2	D	T			
25	Toe fractures	2	D	T			
26	Ingrown toenail	2	D	T			
27	Flatfoot	1	D				
28	Clubfoot	1	D				
29	Clawfoot	1	D				
30	Hallux valgus	2	D	T			
31	Hammer toe	2	D	T			

4 Thorax, respiratory tract, heart and vessels

A Thorax

01	Pigeon chest, funnel chest	2	D					
02	Rib fractures and contusions	2	D	T	E	A		
03	Injury due to rib fractures	2	D		E	A	P	
04	Sternum fractures	2	D	T		A		
05	Thorax instability	2	D	T	E		P	
06	(Tension) pneumothorax	2	D	T	E	A	P	
07	Haemothorax	2	D	T	E	A	P	
08	Sternum infections	2	D					

B Trachea, bronchi

01	Aspiration	2	D		E	A	P	
02	Foreign bodies	2	D		E			
03	Bronchus rupture	2	D		E	A	P	

C Lung

01	Lung contusion	2	D		E			
02	Aspiration pneumonia	2	D	T	E		P	
03	Respiratory distress syndrome, ARDS	2	D	T			P	
04	Acute respiratory disorders	2	D	T	E		P	
05	Lung tumours	2	D	T		A		
06	Mediastinal tumours	2	D			A		

D Heart

01	Acute circulatory disorders	2	D	T	E	A	P	
02	Cardiac contusion	2	D					
03	Cardiac tamponade	2	D		E		P	
04	Coronary heart disease	2	D	T		A	P	
05	Heart valve defects	2	D	T		A	P	
06	Acute aortic dissection	2	D		E	A	P	
07	Congenital heart defects	1	D	T				

E Arteries

01	Atherosclerosis	2	D				P	
02	Raynaud's phenomenon	2	D					
03	Acute arterial occlusion	2	D	T	E	A	P	
04	Occlusion / stenosis of the femoro-popliteal region	2	D			A		
05	Occlusion / stenosis of the aorto-iliac region	2	D			A		
06	Occlusion / stenosis of the distal arteries of the lower extremities	2	D					
07	Renal artery stenosis and its consequences	2	D				P	
08	Abdominal aortic aneurysm	2	D	T	E			

09 Thoracic aortic aneurysm	2	D				
10 Cerebrovascular ischaemia	2	D	T			
11 Thoracic outlet syndrome	2	D				
12 Subclavian steal syndrome	2	D		E	A	
13 Aortic rupture	1	D			A	
14 Open and closed traumatic vascular injuries	2	D		E		
				E		

F Veins

01 Varicose veins (primary, secondary)	2	D	T		A	P
02 Deep venous thrombosis	2	D	T			P
03 Venous injuries	2	D		E		

G Lymphatics

01 Lymphangitis	2	D	T			
02 Acute and chronic lymphadenitis	2	D	T			
03 Primary and secondary lymphoedema	2	D				
04 Lymphangiosarcoma	1	D				

5 Oesophagus, gastrointestinal tract

A Oesophagus

01 Oesophageal atresia	1	D			A	
02 Achalasia	1	D	T		A	P
03 Diverticulum	2	D			A	
04 Corrosive oesophageal injuries (acid, alkali, stenosis)	2	D	T	E		
05 Malignant tumours	2	D	T			
06 Oesophageal varices	2	D		E	A	P
07 Oesophageal rupture	2	D		E		

B Stomach and duodenum

01 Pyloric hypertrophy, stenosis	2	D			A	P
02 Duodenal atresia	2	D			A	P
03 (perforated) gastric/duodenal ulcer	2	D	T	E		P
04 Gastrointestinal haemorrhage	2	D	T	E	A	
05 Zollinger-Ellison syndrome	1	D				P
06 Post-gastrectomy syndrome (complications)	1	D				P
07 Mallory-Weiss syndrome	1	D				
08 Gastric dilatation	2	D		E		
09 Gastric carcinoma	2	D	T		A	
10 Foreign bodies	2	D		E		
11 Benign tumours (leiomyoma, polyps)	1	D				

C Jejunum, ileum

01	Intestinal atresia	1	D				
02	Meckel's diverticulum	2	D	T		A	
03	Umbilical fistula	2	D	T			
04	Malrotation	1	D				
05	Regional enteritis	2	D	T			
06	Benign and malignant tumours	1	D	T			
07	Carcinoid syndrome	2	D	T			P

D Colon

01	Necrotising enterocolitis	2	D		E		P
02	Diverticulosis / diverticulitis	2	D	T	E		
03	Colon carcinoma	2	D	T		A	
04	Ulcerative colitis	2	D	T	E		
05	Polyps (adenomas, familial polyposis)	2	D	T			
06	Penetrating abdominal trauma	2	D		E		
07	Crohn's disease	2	D	T			
08	Pseudomembranous colitis	2	D	T	E		P
09	Hirschsprung's disease	2	D				P

E Rectum and anus

01	Hirschsprung's disease	2	D				P
02	Polyps (adenomas, familial polyposis)	2	D	T			
03	Rectal and anal prolapse	2	D	T	E	A	
04	Proctitis	2	D	T			
05	Haemorrhoids	2	D	T	E	A	
06	(Peri-) anal abscess	2	D	T		A	
07	Fistulas	2	D	T		A	
08	Anal fissures	2	D	T		A	
09	Condylomas	2	D				
10	Rectal carcinoma	2	D	T		A	
11	Traumatic rectal perforation	2	D		E		

6 Abdomen and abdominal organs

A Diaphragm

01	Diaphragm rupture	2	D		E	A	
02	Diaphragmatic hernia	2	D	T	E	A	
03	Hiatus hernia	2	D	T		A	P

B Abdominal wall and hernias

01	Inguinal hernia, direct and indirect	2	D	T		A	
02	Femoral hernia	2	D	T		A	
03	Epigastric hernia	2	D	T		A	
04	Incisional hernia	2	D	T		A	
05	Umbilical hernia	2	D	T		A	
06	Incarcerated hernias	2	D	T	E		
07	Rectus diastasis	2	D	T			

C Acute abdomen

01	Acute abdomen	2	D		E		P
02	Peritonitis	2	D	T	E		P
03	Douglas abscess	2	D	T	E		
04	Subphrenic abscess	2	D	T	E		
05	Ileus (proximal, distal)	2	D		E		P
06	Perforation	2	D		E	A	
07	Small bowel volvulus, congenital malrotation	2	D			A	
08	Invagination	2	D		E	A	
09	(Acute) appendicitis	2	D	T	E	A	
10	Mesenteric lymphadenitis	2	D				
11	Adhesions	2	D	T			
12	Salpingitis	2	D	T		A	
13	Ovarian torsion	2	D	T	E		
14	Corpus luteum rupture	2	D	T			
15	Extrauterine pregnancy	2	D	T	E		

D Liver

01	Primary liver tumour	1	D	T		A	
02	Secondary liver tumour	2	D	T		A	
03	Cystic echinococcosis	1	D	T		A	
04	Amoebic abscess	1	D	T		A	P
05	Liver injury	2	D		E		
06	Portal hypertension	2	D	T		A	P
07	Liver cirrhosis	2	D				P
08	Hepatitis	1	D				P

E Gallbladder / biliary tract

01	Chole(docho)lithiasis (icterus, cholangitis)	2	D	T	E	A	
02	Acute cholecystitis	2	D	T		A	
03	Hydrops of the gallbladder	2	D	T	E	A	
04	Gall bladder empyema	2	D	T	E	A	P
05	Bile fistula (internal, external)	2	D	T		A	P
06	Gallstone ileus	2	D	T	E	A	
07	Bile duct stricture	1	D	T		A	
08	Carcinoma of the gallbladder / bile ducts	2	D	T		A	
09	Bile duct injury	2	D	T		A	
10	Biliary tract atresia	1	D			A	

F Pancreas

01	Annular pancreas	1	D			A	
02	Acute pancreatitis	2	D	T	E		P
03	Chronic pancreatitis	2	D	T			
04	Pancreatic pseudocysts	2	D	T			
05	Pancreatic carcinoma	2	D	T			
06	Pancreatic injury	2	D		E		
07	Pancreas and vascular complications	2	D				
08	Insulinoma	1	D				P

G Spleen

01	Rupture, subcapsular haemorrhage	2	D		E	A	
02	Splenomegaly and "haematological" spleen	2	D	T		A	P

7 Head, jaw, neck, CNS and peripheral nerves, plastic and paediatric Surgery

A Skull, face, mouth, jaw

01	Impaired consciousness	2	D		E		
02	Head injury and facial trauma	2	D	T	E	A	P
03	Post-concussion syndrome	2	D	T			P
04	Facial injuries	2	D			A	
05	Candidiasis	2	D	T			
06	Odontogenic abscess	2	D	T			
07	Sialolithiasis	2	D	T			
08	Tooth avulsion and fractures	2	D		E		
09	Trismus and other impairments of mouth opening	2	D		E	A	
10	Jaw dislocation	2	D		E	A	
11	Jaw fracture	1	D		E	A	
12	Le Fort I, II, III fractures	1	D		E	A	

13	Isolated fractures of the zygomatic arch and orbit floor	1	D			
14	Jaw and facial emergencies, vital risks, obstruction of the upper respiratory tract, haemorrhage	2	D		E	
15	Facial nerve paresis	2	D			
B Neck						
01	Medial and lateral branchial cysts and fistulas	2	D			A
02	Torticollis	2	D	T		
C Thyroid and parathyroid glands						
01	Cysts	2	D			P
02	Goitre	2	D	T		A P
03	Hyperthyroidism	2	D	T		P
04	Hyperparathyroidism	2	D	T		P
05	Hypoparathyroidism	1	D	T		P
06	Multiple endocrine neoplasia syndromes	2	D			
07	Malignant thyroid tumours	2	D	T		
D Cranial and peripheral nerves (neurosurgery)						
01	Raised intracranial pressure (acute, chronic)	2	D	T	E	P
02	Benign and malignant brain tumours	2	D			
03	Neurosurgically relevant stroke/cerebral ischaemia	1	D		E	
04	Neurosurgically relevant subarachnoid haemorrhage, intracerebral haemorrhage	2	D		E	
05	Arteriovenous malformations (AVM) and other angiomas	1	D			
06	Neurosurgically relevant head injuries (epi-, subdural and intracerebral haematomas, contusions etc.)	2	D		E	
07	Hydrocephalus and malformations	1	D			
08	Function of peripheral nerves	2	D			A P
09	Injury of peripheral nerves	2	D	T		A
10	Cushing's syndrome	2	D			P
11	Pituitary tumour	2	D			P
E Paediatric conditions						
01	Osteogenesis imperfecta	1	D		E	
02	Injuries of the epiphysis in children	2	D	T		
03	Coxitis in children	2	D	T		

8 Gynaecology including breast surgery, urology, pelvis

A Breast

01	Inflammation	2	D	T	
02	Mastopathy	2	D	T	P
03	Gynaecomastia	2	D	T	P
04	Benign cysts and tumours	2	D	T	
05	Malignant breast tumours	2	D	T	
06	Breast abscesses (in lactating women)	2	D	T	
07	Breast asymmetry, anomalies	1	D	T	

B Gynaecological complaints and emergencies

01	Gynaecological causes of abdominal pain and acute abdomen (extrauterine pregnancy, ovarian cyst, adnexitis, endometriosis, pregnancy)	1	D	T	
02	Rectovaginal fistula	1	D		
03	Urinary incontinence	1	D		
04	Gynaecological lower abdominal tumours, infiltration of surrounding organs (bladder, bowel etc.)	2	D		
05	Pathological fractures due to gynaecological tumours	1	D		
06	Fractures due to osteoporosis, hormonal aspects	1	D		
06	Trauma in pregnancy	2	D		E

C Male genitalia

01	Hypospadias	2	D		
02	Epispadias	2	D		
03	Undescended testis (cryptorchidism)	2	D	T	A
04	Torsion of testis	2	D	T	E A
05	Epididymitis, orchitis	2	D	T	E
06	Spermatocoele	2	D		
07	Varicocoele	2	D		
08	Hydrocoele	2	D	T	
09	Phimosis, paraphimosis	2	D	T	E
10	Testicular carcinoma	2	D		
11	Injury of the scrotum and scrotum contents (trauma)	2	D		E
12	Pelvic trauma, urethral injury	2	D		E A

D Kidneys, adrenals, urinary tract and prostate

01	Pyelonephritis, acute, chronic, pyonephrosis	2	D	T	E
02	Cystitis	2	D	T	P
03	Urethritis	2	D	T	
04	Urinary incontinence	1	D		
05	Urolithiasis / renal colic	2	D	T	E A
06	Urothelial tumours	1	D		

07	Wilms tumour	1	D			
08	Renal cell carcinoma	1	D			
09	Tumours of the renal pelvis and ureter	1	D			
10	Injury of the kidney and distal urinary tract (trauma)	2	D		E	A
11	Prostatic hyperplasia	2	D			
12	Prostatic carcinoma	2	D			
13	Prostatitis	2	D	T		
14	Urinary retention	2	D	T	E	
15	Conn's syndrome	2	D			P
16	Phaeochromocytoma	2	D			P

9 General: methods, sterility, law, ethics

A General treatment methods and techniques

01	General examination techniques	2	D			A
02	Basic knowledge of instruments	2				
03	Basic knowledge of diagnostic and therapeutic apparatus (imaging methods such as X-ray, CT, MRI, ultrasound, laser technology)	2				
04	Hospital hygiene	2				
05	Sterility	2				
06	Wound care, dressing types and indications	2				A
07	Basic first aid knowledge	2			E	P
08	Tetanus prophylaxis	2		T		P
09	Indications and contraindications to analgesics	2		T		P

B Pre-, peri- and postoperative treatment and monitoring

01	Radiological examination	1	D			A
02	Preoperative treatment	2		T		
03	Postoperative treatment	2		T	E	
04	Intensive care treatment	2		T		P
05	Complications	2		T	E	
06	Rehabilitation	1		T		

C Patient rights, patient care

01	Patient rights, informed consent, patient records					
02	Insurance (KVG, UVG etc.)	2				
03	Certificates and reports	2				
04	Informing relatives, authorities etc.	2				
05	Death certificate	2				

D *Medical law, liability, occupational medicine, quality assurance, epidemiology*

01	Medical law	2
02	Working principles and medical ethics	2
03	Liability	2
04	Quality management and quality assurance	2
05	Health economics definitions (flat-rate payment, cost distribution)	2
06	Surgical terminology, ICD coding etc.	2
07	Basic concepts of clinical epidemiology and statistics	2