

Austrian Competence Level Catalogue

- for Medical Skills -

Partners

Austrian Competence Level Catalogue for Medical Skills

Preamble

The Medical Universities of Austria have agreed on a joint minimum catalogue of requirements for medical skills and capabilities with three competence levels

- Clinical Clerkship Competence
- Clinical Practical Year Competence and
- Medical Licensure Competence

as a mandatory basis for designing individual degree courses in human medicine. The Competence Level Catalogue is published here.

The list of "General Skills" from the Swiss Catalogue of Learning Objectives (SOLO 2nd Edition) was taken as a benchmark. Based on this framework, internal university coordination was undertaken by means of a written questionnaire sent to the relevant specialist staff. In addition, teaching hospitals, teaching departments and teaching practices were asked to give their opinions regarding the skills and levels.

The framework conditions for our students and graduates were changed by the extension of Section 54 Paras. 4 and 5 of the Austrian Physicians' Act and the introduction of "Ius migrandi" in December 2010. This Catalogue can now be used for comparability of the curricular offer at the four Medical Universities. The universities are asked to examine in detail their curricula and assessment of performance and adapt them if necessary.

With this initiative the Working Group hopes to have laid the cornerstone for an outcome-based requirements catalogue for the training of medical students in Austria.

Ass.-Prof. Dr. Michael Schmidts and Dr. Karen Pierer, MHPE
On behalf of the Inter-University Competence Level Working Group

Members of the Working Group (in alphabetic order)

Medical University of Graz:

Ass. Univ.- Prof. Dr. Florian Iberer, PD Mag. Dr. rer. nat. Adelheid Kresse, Mag. rer. nat. Simone Manhal,
Univ.- Prof. Mag. Dr. rer.nat. Gilbert Reibnegger, Associate Univ.- Prof. Dr. Hermann Toplak

Medical University of Innsbruck:

Univ.- Prof. Dr. Martin Krismer, Sanja Mikerevic, Univ.- Prof. Dr. Norbert Mutz, Dr. Karen Pierer, Ass.Univ.-
Prof. Dr. Wolfgang Prodinger, Univ.- Prof. Dr. Wolfgang Vogel

Medical University of Vienna:

Univ.-Prof. Dr. Franz Kainberger, Univ.-Prof. Dr. Martin Lischka, Univ.-Prof. Dr. Anton Luger, Univ.- Prof.
Dr. Rudolf Mallinger, Univ.- Prof. Dr. Anita Rieder, Ass. Prof. Dr. Michael Schmidts

Paracelsus Private Medical University of Salzburg:

Univ.- Prof. Dr. Klaus Albegger, Univ.- Prof. Dr. Michael Studnicka

Clinical Clerkship Competence level

By this point in time students have acquired a theoretical background and have performed their skills on a model, in role play or on simulation patients with feedback. The aim of mandatory clerkships is to perform these skills routinely on patients.

History taking	
S 1	Clarifying the patient's expectations and requests for the consultation
S 2	Taking a systematic history (symptoms, current complaints, the patient's life situation, his/her understanding of the illness and concerns, social and cultural background and illness experience)
S3	Noting and reacting to non-verbal cues
S4	Identifying hazardous behavior and dangerous lifestyles
S5	Communicating in a multi-disciplinary team
Basic status	
S6	Assessment of general condition (habitus and posture, symmetry and mobility of body) and nutritional state
S7	Assessment of vital functions (body temperature, respiration, pulse rate, blood pressure, venous pressure)
S8	Assessment of orientation in space and time
S9	Recording of anthropometric data (height, weight, body mass index [BMI], skull circumference, waist and hip circumference)
S10	Examination of bones, joints and muscles
S11	Examination of peripheral and central arterial pulses, detection of arterial bruits
S12	Examination of lymph node areas
S13	Description of nails, scalp and visible mucous membranes
S14	Description of pupil, direct reaction of pupil to light and convergence
S15	Inspection and palpation of nose and face
S16	Inspection of lips, oral cavity and oral pharynx including teeth, tongue, base of tongue, pharyngeal arches, tonsils, and inspection of excretory ducts of parotid glands (Stenon's duct) and submandibular gland (Warthon's duct)
S17	Inspection, palpation and auscultation of neck (larynx, thyroid, carotid arteries and lymph nodes)
S18	Palpation of head and cervical spine
S19	Inspection of shape and mobility of the thorax, testing for pain/tenderness on percussion and palpation
S20	Assessment of respiratory chest expansion by inspection and palpation
S21	Palpation of apex beat (heart)
S22	Percussion of lungs including respiratory shifting of diaphragm
S23	Auscultation of the lungs
S24	Auscultation of the heart
S25	Inspection of the abdomen
S26	Auscultation of abdomen (bowel sounds, bruits)
S27	Percussion of abdomen (particularly liver)
S28	Palpation of abdomen (abdominal wall, colon, liver, spleen, aorta, abdominal masses)
S29	Investigating renal tenderness
S30	Eliciting peripheral reflexes (triceps, biceps, knee, ankle) and plantar response (Babinski sign)

Austrian Competence Level Catalogue for Medical Skills

Practical skills	
F31	Basic life support for adults: assessment, breathing, circulation, defibrillation (Automatic External Defibrillation) until arrival of professional emergency medical personnel (demonstrated on simulator)
F32	Stopping hemorrhage (direct pressure, pressure points of major vessels, pressure bandage, tourniquet)
F33	Using appropriate hand hygiene at the workplace
F34	Intravenous injection and peripheral cannulation
F35	Subcutaneous and intramuscular injection
F36	Venepuncture/taking blood
F37	Finger prick
F38	Taking blood for a blood clotting test
F39	Removal of wound sutures
F40	Application of a bandage
F41	Application of a sling
F42	Preparation to watch / to assist in operating theatre (scrub-up, gown up, put on sterile gloves, etc.)
F43	Preparation of an infusion (technical competence)

Clinical Practical Year Competence level

By this point in time students have acquired a theoretical background and have performed the skill on at least a model, in role play or on simulation patients with feedback. Those skills that students have already acquired for Clinical Clerkship Competence should have been performed on patients during the mandatory clinical clerkship. Certain skills will continue to be possible only in simulation. These are listed explicitly.

History taking/communication	
C1	Taking targeted, hypothesis-directed history
C2	Taking history from third party
C3	Taking psychiatry history
C4	Communicating with severely ill patients
C5	Communicating with dying patients
C6	Taking history in patients with special communication needs, e.g. language or speech problems
C7	Drawing a family tree
C8	Taking history in a travel-related medical problem
C9	Taking occupational and workplace history
C10	Taking psychoactive/potentially addictive substance history
C11	Elaborating a clinical question and searching for its solution in the literature
C12	Informing colleagues and other medical professionals on findings and checking understanding
C13	Recording findings in patient file
C14	Counseling patients related to lifestyle (diet, physical activity, nutrition, smoking, alcohol, illicit drugs)
C15	Filling in prescription forms
C16	Retrieving patient-specific information from clinical data system
C17	Assessment of mood and mental status
C18	Performing a geriatric assessment
C19	Dealing with and behaving appropriately in the face of aggression
C20	Working in a multidisciplinary team
Physical examination	
C21	Assessment of skin and mucous membranes (signs of anemia, cyanosis, jaundice, edema, dehydration)
C22	Assessment of attention, thought (form and content), perception, affect and psychomotor behavior
C23	Detailed description of skin lesions
C24	Testing for dermatographism
C25	Description of upper eyelid after eversion
C26	Determination of sensation to touch of cornea
C27	Inspection and palpation of auricle and adjacent region (mastoid)
C28	Inspection of external auditory canal and tympanic membrane with otoscope
C29	Hearing tests with whispering, conversational voice and tuning fork
C30	Palpation of floor of the mouth, cheeks, tonsils and base of tongue
C31	Inspection and (bimanual) palpation of parotid and submandibular glands

Austrian Competence Level Catalogue for Medical Skills

C32	Assessment of voice and speech including recognition of aphasia
C33	Testing for mobility, tenderness and neck stiffness
C34	Examination of bones, joints and muscles of shoulder girdle
C35	Inspection and palpation of breasts including regional lymph nodes
C36	Inspection of abdomen including eliciting abdominal tenderness, rebound tenderness and guarding
C37	Eliciting abdominal fluid thrill (ascites)
C38	Testing for inguinal hernia by inspection and palpation (also during increased abdominal pressure) of groin / hernial orifices
C39	External inspection and palpation of (peri)anal area
C40	Rectal examination in male
C41	Inspection and palpation of penis and scrotum (testes, epididymis, spermatic cord) including transillumination of scrotum
C42	Inspection and palpation of female external genitalia (vulva, perineum)
C43	Examination of spine, spine mobility and paravertebral muscles standing and supine (kyphosis, scoliosis, lateral tilt, Schober procedure, position-dependent pain)
C44	Palpation, percussion and axial compression of spine for tenderness and pain
C45	Examination of iliosacral joint and pelvis including muscles (mobility, pain, atrophies)
C46	Assessing shape, function, motility and tenderness of upper extremities (elbow, wrist, finger joints and relevant structures and muscles)
C47	Assessing shape, motility, stability and tenderness of lower extremities and relevant structures and muscles (ankle and knee, meniscus signs, position of patella, patella function and relief)
C48	Assessing axes of legs on standing (genu valgum, genu varum)
C49	Assessing feet on standing (pes planus, pes valgus)
C50	Assessment of capillary pulse and refill
C51	Testing for arterial insufficiency (Ratschow-Test)
C52	Assessing varicose veins with Trendelenburg test and Perthes test
C53	Assessment of function of cranial nerves
C54	Assessment of passive muscle stretch, inspection of muscle bulk, muscle tone, muscle strength and involuntary movements
C55	Eliciting complex reflexes: abdominal, anal, masseter, snout, grasp
C56	Inspection of gait (normal, on heels, hopping in one place)
C57	Testing of coordination (finger-to-nose, heel-to-shin, heel-to-toe, diadochokinesis)
C58	Romberg's test, Unterberger's test
C59	Recovering of balance after push
C60	Assessment of sense of touch and mechanical sense of pain
C61	Assessment of sense of temperature, sense of vibration and position sense
C62	Assessment of discriminative sensations (e.g. stereognosis)
C63	Testing for meningeal irritation
C64	Testing for cervical and lumbar radicular signs
C65	Assessment of level of consciousness by means of Glasgow coma scale
C66	Assessment of memory, Mini Mental Status, Clock test
C67	Speculum examination: inspection of vagina and cervix (with simulator)

Austrian Competence Level Catalogue for Medical Skills

	Procedures
C68	Advanced cardiac life support (basic cardiac rhythm algorithms, with simulator)
C69	Assessment and initial care of external injuries (wounds, bleeding, burns, sprains, dislocations, fractures)
C70	Intravenous injection
C71	Urinary catheterization
C72	Handling a central venous catheter
C73	Pre-operative preparation of operative field for minor surgery, asepsis and antisepsis
C74	Patient instruction for mid-stream urine sample collection
C75	Performing and reading of urine stick test
C76	Taking an electrocardiogram at rest
C77	Spirometry
C78	Taking a throat swab
C79	Application of eye dressing
C80	Instillation of eye drops
C81	Application of eye ointment
C82	Flooding and rinsing ocular tissue
C83	Ear irrigation
C84	Wound cleaning
C85	Stitching of skin incisions and lacerations
C86	Filling out a requisition form for instrumental investigations (lab tests, imaging)

Medical Licensure Competence

Students have both acquired the theoretical background and have performed the skill at least on a model, in role play or on simulation patients with feedback. Those skills that students have already acquired for Clinical Practical Year Competence or Clinical Clerkship Competence should have been performed on patients. Certain skills will continue to be possible only in simulation. These are listed explicitly.

History taking and professional doctor-patient interaction	
L1	Providing information to patients and relatives in an ethically correct and professional manner in accordance with legal requirements and ensuring that the patient has understood the information
L2	Checking patient compliance
L3	Handling phone calls with patients or third persons in an ethically correct and professional manner (in accordance with legal requirements)
L4	Giving main information elements necessary to get informed consent
LS	Breaking bad news to patients and family (simulated situation)
L6	Writing letters for transfer or discharge of patient
L7	Prescribing measures in treatment of pain, palliative and end-of-life care
L8	Filling-in a death certificate and/or requesting post-mortem examination (simulated situation)
L9	Summarizing the main points of diagnoses, active problems and management plans of a patient
L10	Diagnostic coding
L11	Clarifying with nursing staff monitoring measures and calling criteria concerning patients
L12	Working with local / national and international guidelines and protocols
L13	Giving teaching presentations and passing on specialist information, procedures and skills to students and other medical professionals
L14	Conservative management of patients with self-limiting disease ("wait and see")
L15	Performing house call and taking history from third person to assess psycho-social, economic and hygienic situation, including risk factors for fall
L16	Identifying ethically problematic situations
L17	Communicating and dealing professionally with geriatric patients
L18	Assessing and managing patients suspected of self-harm (excluding suicide)
L19	Communicating and dealing professionally with children and young people and their relatives with and without mental disabilities
L20	Advising and supporting patients (empowerment)
L21	Beraten bzgl. Giving advice about contraception and post-coital interception
Advanced specialist examinations	
L22	Assessment of patients with medical emergencies and after trauma
L23	Assessment of basic and instrumental activities of daily living
L24	Clinical diagnosis of death (in a teaching situation)
L25	Description of optic fundus (optic disc and retinal vessels – discrimination normal-abnormal)
L26	Rectal examination in female: anus, rectum, palpation of pouch of Douglas and uterus (with simulator)

Austrian Competence Level Catalogue for Medical Skills

Procedures (clinical measures)	
L27	Assessment of trauma patients according to the ABCDE (advanced trauma life support - ATLS)
L28	Accompanying transport of casualty (in a teaching situation)
L29	Application of local anesthesia
L30	Using and giving instructions to use metered dose inhalers, spacers and nebulizers
L31	Attaching a pulse oximeter and interpreting the results
L32	Determining the indication, dosage and use of oxygen therapy (timing)
L33	Dosage, on-going checking and documentation of oral anti-coagulation
L34	Managing patients with contradictory investigation results
L35	Checking drug therapy for drug interactions
L36	Identification of drug side effects and their management
L37	Basic life support for children
L38	Managing psychiatric emergencies and crises
L39	Compliance with legal requirements (Austrian Physicians' Act, Hospitals Act, Insurance Act)
L40	Identification of indications and signs of child abuse



This his project has been funded with support from the European Commission. This publication communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.