



Training Programme (essential elements) Clinical Practical Year (CPY) at Medical University of Vienna, Austria

CPY-Tertial C

Anaesthesiology and Intensive Care Medicine

Valid from academic year 2026/2027

Responsible for the content

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This training plan is valid for the completion of the subject *“Anaesthesiology and Intensive Care Medicine”* as part of CPY tertial C *“Electives.”* If *“Anaesthesiology and Intensive Care Medicine”* is completed as part of the compulsory CPY Tertial B *“Surgical and Perioperative Subjects,”* the learning objectives listed under Section 3 of this training plan may be added as optional learning objectives in the logbook for compulsory CPY tertial B, in addition to the learning objectives of CPY tertial B.

The training plans for elective subjects in CPY Tertial C are each designed for a duration of 8 weeks. In the case of a 16-week completion of the subject within CPY Tertial C, the specified content must be covered in greater depth.



General Objectives of the Clinical Practical Year

Key points of training in the Clinical Practical Year are:

1. The CPY takes place in the 6th year of study and comprises 48 weeks.
2. The CPY serves to acquire and deepen the competencies listed in the Austrian competency level catalogue for medical skills and according to European requirements (EU Directive-Basic Studies).
3. The application and deepening of learning in the learning context must take place on a clinical ward, in an outpatient clinic, or in a teaching practice (General Medicine) with patients under supervision. An exception is made for elective subjects in non-clinical specialist areas, provided these are intended as elective options in the CPY.
4. The focus is on self-directed learning through real tasks in clinical practice (task-based learning).
5. The emphasis is on patient care under guidance (see § 49 Para. 4 and 5 Medical Practitioners Act 1998, BGBl. I No. 169/1998, as amended). A purely observational role (passive participation in ward rounds, tumour boards, etc.) is not sufficient.
6. Active participation in clinical practice (e.g., patient presentations by students, participation in training and continuing education events, ward rounds, tumour boards) is an essential part of the training. Independent deepening of knowledge regarding the problems encountered should be practised—also in the spirit of lifelong learning.
7. Practising clinically problem-oriented scientific thinking and evidence-based medical action in patient management.
8. Integration into a treatment team and assumption of tasks appropriate to the level of training. Students are trainees who are involved in clinical activities to the extent necessary to achieve training objectives. It must be ensured that the Clinical Practical Year, as part of the studies, secures the required breadth of clinical training.
9. Practising professional behaviour towards both patients and their relatives as well as various professional groups and public institutions.
10. Promoting personal initiative and responsibility for one's own education and continuing professional development.

Subject-specific Information

1. Objectives of the Discipline Anesthesiology and Intensive Care Medicine within the Clinical Practical Year (CPY)

During the Clinical Practical Year (CPY), students are expected to consolidate and further develop the knowledge and skills acquired during their preceding medical education. Active participation in clinical practice and supervised involvement in patient care aim to facilitate a structured transition toward independent professional practice.

Anesthesiology and Intensive Care Medicine may be undertaken during Tertial B within the framework of surgical and perioperative disciplines for a duration of eight weeks. In addition, the discipline may be selected as an elective for a period of eight or sixteen weeks. A combination of Anesthesiology in the compulsory component (Tertial B) and Intensive Care Medicine in the elective component (Tertial C) is also possible. A rotation in Intensive Care Medicine or specialized pain therapy is particularly recommended in the context of a sixteen-week placement, as this duration allows for more comprehensive and in-depth training. Through integration into routine clinical workflows, students are expected to acquire, practice, and—under appropriate supervision—partially perform core competencies in Anesthesiology and Intensive Care Medicine. Training is conducted under the guidance of qualified specialists.

The primary aim of this training is to develop practical competence in life-sustaining interventions and anesthesiological procedures. Students are expected to recognize perioperative conditions, formulate diagnoses and differential diagnoses, and apply appropriate clinical reasoning. Additional emphasis is placed on the safe and effective performance of invasive procedures in everyday clinical practice. Furthermore, students are expected to develop professional communication skills within interdisciplinary teams and in interactions with patients and their relatives.

Upon completion of the CPY, students should be able to obtain a structured medical history with particular attention to anesthesia-related risks, interpret clinical findings including electrocardiograms, propose appropriate further diagnostic investigations, and perform essential procedural skills in anesthesiology under supervision. The practical component will be supplemented by e-learning, literature searches, the study of relevant literature, and participation in continuing education events.

2. Clinical Areas of Activity

The clinical activities covered by this rotation include preoperative patient assessment with a particular focus on medical history taking and evaluation of anesthesia-related risks. Students are further involved in the process of obtaining informed consent and assist in the preparation and delivery of intraoperative anesthetic management. Additional responsibilities include participation in postoperative patient care as well as involvement in the monitoring

and support of patients during transport for diagnostic procedures, particularly in the context of critically ill patients.

The teaching content outlined below is intended to be incorporated into Mini-Clinical Evaluation Exercises (Mini-CEX), Direct Observation of Procedural Skills (DOPS), and CPY-related assignments. It serves as guidance and orientation for the structured design of the CPY tertial. The list is not exhaustive and may be expanded to clinical requirements.

- Preoperative assessment of anesthesia-related risk
- Perioperative hypotension and hemodynamic instability
- Intraoperative hemorrhage
- Dyspnea
- Shock
- Difficult airway and anticipated difficult intubation
- Postoperative pain
- Postoperative nausea and vomiting (PONV)
- Allergic and anaphylactic reactions in the perioperative setting

3. Learning objectives (competences)

In the final years of their medical studies, students have acquired both theoretical knowledge and practical skills. These competencies have been developed through clinical placements, simulation-based training and to a limited extent, through supervised practice involving patients.

The objective of the Clinical Practical Year (CPY) is to further develop and consolidate these skills through active participation in real patient care under appropriate supervision.

The following competencies are to be acquired or further refined in the discipline of Anesthesiology and Intensive Care Medicine during the CPY period.

3.1 Competences to be achieved (mandatory)

A) History taking

1. Perform a structured anesthesiological history, including assessment of perioperative risk and appropriate classification according to the ASA Classification
2. Identify anamnestic indicators of a potentially difficult airway and other anesthesia-related complications
3. Assess and document patient-specific risk factors as a basis for individualized anesthetic evaluation and informed consent performance of examination techniques

B) Performance of examination techniques

4. General clinical examination

5. Interpretation of electrocardiograms (ECG), including the recognition of emergency findings
6. Assessment and interpretation of vital parameters
7. Evaluation and assessment of the airway with regard to planned intubation and alternative airway management strategies
8. Selection of an appropriate anesthetic technique (participation)
9. Assessment of perioperative volume and electrolyte management
10. Recognition and evaluation of extubation criteria
11. Interpretation of relevant laboratory findings in the perioperative and Intensive Care Setting
12. Assessment and discussion of radiological findings in a clinical context
13. Recognition of adverse drug reactions and initiation of appropriate management
14. Performance of basic transfusion procedures (e.g., crossmatching)
- C) Performance of routine skills and procedures
 15. Positioning a peripheral venous cannula
 16. Positioning a gastric tube
 17. Positioning a bladder catheter
 18. Removal of a thoracic drain
 19. Participation in the positioning of a central venous catheter
 20. Proper handling of central venous catheters
 21. Preparation and administration of infusions
 22. Positioning an arterial cannula
 23. Participation in Invasive advanced monitoring, including Interpretation of findings
 24. Adjusting a respirator
 25. Verification of proper patient positioning
 26. Performance of mask ventilation
 27. Performance of a laryngoscopy
 28. Basic life support: simulation
 29. Safe operation of a defibrillator, including adherence to safety principles
 30. Requesting and scheduling diagnostic imaging or other technical examinations
 31. Requesting specialist consultations
- D) Therapeutic measures
 32. Initiation of appropriate analgesic therapy considering individual patient factors
 33. Recognition of indications for oxygen therapy and initiation of treatment
 34. Initiation of guideline-based prophylaxis and treatment of postoperative nausea and vomiting
 35. Participation in the administration of vasopressors and catecholamines
 36. Participation in the management of perioperative bleeding, including indication for blood product administration and their appropriate use
 37. Participation in the stabilisation of severely injured or critically ill patients
 38. Accompaniment of emergency and intensive care transport of patients

- 39. Participation in antimicrobial therapy management
- E) Communication with patients/team
 - 40. Application of professional communication skills in counseling and informed consent situations
 - 41. Application of empathetic and professional communication skills in delivering distressing diagnoses and prognoses (simulation-based)
 - 42. Patient information regarding an intervention or planned anesthetic procedure
 - 43. Collaboration within a multidisciplinary team
- F) Documentation
 - 44. Documentation of the anesthesiological course, including relevant vital parameters and interventions
 - 45. Retrieval of information from the hospital information system

3.2 Optional competences

In addition to the competences that are mandatory to be achieved, optional competencies may also be acquired.

- 1. Advanced haemodynamic monitoring:
 - 1.1. Functional principles: pulse contour analysis, thermodilution and their limitations
 - 1.2. Handling a PiCCo, pulmonary arterial catheter
 - 1.3. ScO₂, SvO₂
 - 1.4. Echocardiography
- 2. Basics of artificial respiration
 - 2.1. Non-invasive/invasive
 - 2.2. Oxygenation parameters, oxygen transport and relevant pathophysiology
 - 2.3. Artificial respiration in common conditions: ARDS, COPD, head injury
- 3. Basics of nutrition
 - 3.1. Energy requirements of the critically ill
 - 3.2. Enteral vs. parenteral
- 4. Basics of renal replacement therapy
 - 4.1. Haemodialysis vs. haemofiltration
 - 4.2. Intermittent vs. continuous
 - 4.3. Anti-coagulation
- 5. Participation in the preparation of a therapy concept for chronic, non-malignant pain
- 6. Participation in the therapy of post-operative pain in in-patients
- 7. Participation in the programming of PCA pumps

4. Information on verification of performance, on-going assessments

4.1 The following aspects can be assessed in the Mini-CEX:

1. Taking a preoperative medical history
2. Explaining interventional procedures (central venous catheter insertion, thoracic drain placement) and anaesthesia procedures to patients
3. Registering an examination
4. Identification of possible risk factors for the planned anaesthesia management
5. Assessment of the perioperative fluid/blood balance and electrolyte loss as well as prescribing their replacement
6. Selection of anaesthesia procedure

This list can be expanded accordingly.

4.2 The following skills can be assessed in the DOPS

1. Mask ventilation
2. Intubation
3. Insertion of a peripheral intravenous cannula
4. Insertion of a gastric tube
5. Insertion of a urinary catheter
6. Handling a central venous catheter
7. Taking blood from an artery

This list can be expanded accordingly.

5. Discipline-specific explanations of CPY learning objectives

The learning objectives are intended to reflect the activities and skills encountered in routine clinical practice that every physician should master in patient care, regardless of their future specialization. This includes medical history taking, preoperative risk assessment, communication with patients and their relatives, and communication within the multidisciplinary healthcare team. In addition, CPY students should acquire competence in airway management as a cross-disciplinary clinical skill. Previously acquired knowledge from earlier stages of medical education should be actively applied and integrated.

6. Discipline-specific explanations regarding reflection in the midterm and final evaluations

Reflection and the final evaluation are conducted by supervising specialists in anesthesiology and intensive care medicine, taking into account the defined learning objectives as well as the logbook. These supervisors are responsible for ensuring the achievement of training objectives and providing regular feedback. Throughout the training period, attainment of learning objectives is assessed using Mini-CEX and DOPS, as well as the logbook. Documentation of participation in educational activities, achievement of optional learning objectives, and the final evaluation further contribute to the documentation of learning progress.

7. Literature

Available as eBooks via the Medical University of Vienna Library:

1. Larsen R. (2006): Anästhesie. Elsevier GmbH, München , 8. Auflage.
2. Burchardi, H., Larsen, R., Marx, G., Muhl, E., Schölmerich, J. (2011): Die Intensivmedizin. Springer, Berlin, Heidelberg, 11. Auflage.
3. Heck, M., Fresenius, M., Busch, C. J. (2014): Repetitorium Anästhesiologie, Springer, Berlin, Heidelberg, 7. Auflage.
4. Fresenius, M., Heck, M. (2011): Repetitorium Intensivmedizin, Springer, Berlin, Heidelberg, 4. Auflage.
5. Daschner, F., Dettenkofer, M., Frank, U., Scherrer, M. (2006): Praktische Krankenhaushygiene und Umweltschutz. Springer, Berlin, Heidelberg, 3. Auflage.