



# **TERMS and CURRICULUM**

## **SSAI ADVANCED EDUCATIONAL PROGRAM**

### **INTENSIVE CARE MEDICINE**

#### **Terms**

The steering committee of the Scandinavian Society of Anaesthesiology and Intensive Care Medicine Intensive Care Advanced Educational Program (SSAI-IC AEP) arranges a training program in intensive care medicine for specialists in anaesthesiology and intensive care medicine. The program is open to other specialists having a certified minimum of one year of full-time general anaesthesia practice not less than 3 years old. However, in case of high demand, specialists in anaesthesiology and intensive care medicine within the Nordic countries are given priority for admission. All participants of the training program must be members of the SSAI, usually through one of its national bodies, where also non-Nordic colleagues may be accepted as members.

The fulfilment of all components of the program entitles the participant to the Scandinavian Diploma in Intensive Care Medicine, the SDIC. The SDIC corroborates with the European Society of Intensive Care Medicine standards by the European Diploma of Intensive Care Medicine (EDIC) being a compulsory requisite.

- The SSAI-IC AEP encompasses two years of intense studies and training.
- The clinic where the applicant is employed, the “host clinic”, will employ the trainee in an appropriate position for the full duration of the program.
- The clinical training is preferably composed of two or more sessions in designated specialties as described in appendix 1.
- The trainee will complete an “ICU Project” as described in appendix 2.

- The training period also includes an exchange program with an intensive care unit in another country as described in appendix 3.
- The trainee will participate and complete 5 four-day dedicated courses appearing in appendix 4.
- The trainee must pass the examination for the European Diploma in Intensive Care Medicine by the European Society of Intensive Care Medicine (EDIC I and II) in order to be entitled to the Scandinavian Diploma in Intensive Care Medicine, SDIC.
- The Scandinavian Diploma in Intensive Care Medicine, SDIC will be issued to a trainee who fulfils all the requirements above and applies for the SDIC using appendix 6.

Any deviation from the standard SSAI-IC terms and conditions or the individual plan of an accepted trainee must be approved by the steering committee. Smaller deviations for practical reasons such as sick or parental leave are accepted by the chairman while matters of principles are discussed by the steering committee.

#### **Responsibilities of the host clinic**

- The host clinic will provide resources and support for the trainee to organize the training program in major fields of intensive care medicine.
- The host clinic will employ the trainee during the 2-year training program including the periods in a/another university clinic.
- Salary during rotation to a non-host university clinic must be guaranteed even if partition may be negotiated between the host clinic and the (other) university clinic.
- The host clinic will appoint a tutor for the ICU project.
- The host clinic will provide the necessary facilities and time (2-4 weeks per year) for the trainee to complete the ICU project.
- Compulsory expenses (including course fees, travelling, accommodation and salary during the period assigned to the ICU project) will be covered by the host clinic.
- The host clinic(s) and the trainee will cooperate with the national representative(s) of the SSAI-IC AEP Steering Committee in organizing an exchange program.

#### **Responsibilities of the SSAI-IC AEP steering committee (SC)**

- The SC will organize five courses of 4 full days length dispersed between the

Nordic countries during the two-years training period. The language will be English.

- The SC through its national representative(s) will facilitate, together with the host clinic, an exchange for the trainee with a clinic in another country.
- The SC through its national representative(s) will assist the trainee and the tutor starting and conducting the ICU-Project upon request.
- The SC through the chairman will remain at the disposal of the trainee to help solving practical problems during the program.

### **Responsibilities of the trainee**

- The trainee must provide an invoice address for the course fees to the secretary at the time of acceptance to the program.
- If the trainee changes contacts, especially email address, it is compulsory to inform the secretary and any pending course without delay.
- It is the unique responsibility of the trainee to verify that the course fee has been paid appropriately. That normally must happen before the course, but other conditions may apply. If payment is not done, the trainee might not be allowed to continue or finish the program.
- During the 2 years of training the trainee will actively participate and assist the host clinic in performing clinical duties including acquisition of advanced theoretical knowledge and training in cognitive, attitudinal, practical and procedural skills as recommended in the training objectives.
- The trainee must keep a record of his/her completion of the different parts included in the Scandinavian Diploma in Intensive Care Medicine, SDIC.
- To finally obtain the SSAI Scandinavian Diploma in Intensive Care Medicine, the trainee must acquire the European Diploma in Intensive Care (EDIC I and II) awarded by the European Society of Intensive Care Medicine.

### **Responsibilities of the ICU project tutor**

- The tutor should be advisor and counsellor for the scientific or quality assurance principles of the "ICU Project".
- The tutor should guide the trainee on how to prepare for the EDIC I and II.

## **Expenses for the program**

All compulsory expenses for this program (including course fees, travelling, accommodation and salary during the ICU project) must be covered by the host clinic. The course fee for each of the 5 four-day courses is 980 Euro VAT excluded. The course fee does not include travel cost and accommodation. Accommodation may be arranged differently on different course sites. Travel must always be booked by the trainee/host clinic. Salary during the ICU project must be covered by the host clinic. Salary during the clinical rotation may be covered by different parties depending on local conditions but finding a solution that guarantees full salary for the rotating candidate is the responsibility of the host clinic.

## **Curriculum**

### **Aims of the training**

- Acquire comprehensive theoretical knowledge in intensive care medicine.
- Acquire sufficient clinical experience and technical skill to identify and handle complex clinical problems and diseases encountered in the intensive care unit.
- Acquire knowledge and mastery of the medical technology used in the intensive care units.
- Acquire knowledge of appropriate ethical standards and ability to cope with the psychological and social effects of critical illness on patients and their relatives.
- Acquire ability to take full responsibility for the quality of treatment and care of the critically ill patient.
- Acquire ability to work in a multi-disciplinary team.
- Acquire knowledge of contemporary research fields.
- Acquire ability to design local standard protocols for quality assurance studies and/or specifications of requirements for purchase within clinically relevant issues.

### **Areas of training**

The program provides acquisition of advanced theoretical knowledge and training in cognitive, attitudinal, practical and procedural skills including application of indications and contraindications, recognition of pitfalls, management of complications of diagnostic and therapeutic procedures, interpretation of data obtained from clinical examination, monitoring and laboratory investigations and determination of actions based on theoretical considerations and the available clinical information.

## **Methods of training**

- Promotion of quality care in the ICU and efficient use of critical care resources with the supervision of the tutor and/or other advanced training instructors.
- Daily clinical rounds.
- Performing critical care procedures.
- Active participation in clinical conferences.
- Evaluation of treatment modalities and participation in quality improvement.
- Intensive Care Medicine services on a 24/7 basis.
- Unit management.
- Communication and collaboration.
- Participation in continuing medical education and research programs.
- ICU Project.
- Participation in the 5 courses organized by SSAI.
- Current with the medical literature.

## **Contents of the training**

Training in practical, attitudinal and procedural skills.

- General/attitudinal: Identification and management of the critical ill patient and awareness of ethical, legal and psychosocial factors.
- Respiratory: recognition, assessment. Basic and advanced management of respiratory distress.
- Cardiovascular: recognition, assessment and management of acute circulatory problems and crises. Basic and advanced cardiopulmonary resuscitation.
- Neurological/Psychiatric: recognition, global assessment and management of common acute neurological and psychiatric problems.
- Renal: recognition, assessment and basic and advanced management of acute renal failure.
- Metabolic: recognition, assessment and treatment of acute metabolic and endocrine crises.
- Gastrointestinal: recognition, assessment and treatment of gastrointestinal crises and hepatic failure.
- Haematological: recognition, global assessment and treatment of coagulation disorders, anaemia and transfusion reactions.
- Infection: recognition, assessment and treatment of manifest or suspected infection.
- Nutrition: assessment of nutritional needs and knowledge of techniques to fulfil these needs.

- Toxicology/drug overdose: recognition, assessment and treatment of intoxications.
- Trauma: assessment and treatment of the trauma patient.
- Monitoring and life support devices.
- Pharmacology: implementation and control.
- Ethical: guidelines, DNR and treatment limitations, patients and family's wishes.
- Organizational: Structure, coordination and quality of patient management. Risk estimation. Triage. Cost containment. Data management systems.

### **Theoretical knowledge**

Theoretical knowledge of the following topics and disorders (including - when applicable- physiology, pathophysiology, pathology, symptomatology, complications, diagnosis and differential diagnosis, prophylaxis and therapy):

- Basic and advanced CPR and cerebral resuscitation
- Respiratory
- Cardiovascular
- Neurological/Psychiatric
- Renal (including electrolytes, acid-base balance)
- Infection and antibiotics
- Haematological
- Gastrointestinal
- Obstetrical/urogenital
- Metabolic and endocrinological
- Nutritional
- Drug overdose and intoxication
- Immunology and transplantation
- Multiorgan dysfunction
- Trauma, burns and environmental insults
- Sedation and analgesia
- Vasoactive drugs
- Pharmacology
- Monitoring
- Transportation
- Organizational/administrative
- Ethical issues in clinical practice

## **Evaluation**

- Discussions with the tutor and/or the advanced training instructors every 3 months.
- Each course is continuously developed according to course evaluations given by the candidates.
- The ICU-Projects are assessed by the candidates listening to the presentations in the last course.
- Members of the steering Committee may attend the last course for an open discussion about the contents of the program.

The entire program will be assessed by an electronic enquiry filled out by the candidates.

## Appendix 1

### Contents of the clinical training

The clinical training should cover all essential fields of Intensive Care Medicine. It is planned to run during the two years of the program. Time is deducted for the courses and for the preparation of the ICU project.

The training should include approximately 12 months in a general intensive care unit. The remaining 12 months should consist of training in at least two specialized university hospital units caring for:

- Cardiovascular surgical, thoracic surgical and cardiac intensive care patients.
- Neurosurgical and neurological intensive care patients.
- Neonatal/pediatric intensive care patients.
- Burn-injuries.

The intensive care units in the training program should fulfill the following requirements:

1. Designated medical and nursing directors.
2. Dedicated intensive care medicine specialists.
3. Full in-house coverage of patient care round the clock.

The time spent in each unit may vary according to individual educational goals.

A minimum of one year of clinical training should be done at a university intensive care unit and (for those already in a university hospital) outside the regular unit where the trainee is employed by the host clinic. The time spent in the specialized units in university clinics will normally constitute this minimum of one year. However, university clinic general intensive care is an option if the trainee has spent recent time in specialized units. If there is need for modification, it should be discussed with the national representatives to find the best solution which finally needs to be approved by the chairman of the program.



## Appendix 2

### ICU Project

As part of the SSAI-IC 2-year program the trainees must complete and present an ICU Project. A preliminary plan for the project must be included in the application.

#### Objective

To practice the competence of performing quality assurance or scientific study activities according to general scientific principles. The trainee will document the ability to independently assess available information or to produce and aggregate information in clinically relevant questions as a basis for local protocols or to be able to formulate scientific questions. The topics must be related to intensive care medicine. If the trainee has already ongoing project it may be included. However scientifically experienced trainees will add to the program learning objectives for themselves and fellow participants if they choose an unfinished or new project within their scientific activities.

#### Method

The ICU Project could be designed as a:

- Research project, observational study, interventional study etc.
- Quality control/development project.
- Systematic literature review, which may involve a case report or a case series.

The national representatives can advise the trainee to formulate an appropriate project.

#### Examples of what can be accepted as ICU project:

1. Research that is a part of ongoing or recently completed PhD work.
2. Observational study of a clinical ICU problem.
3. Retrospective or prospective quality assurance project, for example
  - a. VAP incidence in your ICU during one year.
  - b. Causes and outcome of sepsis in your ICU during one year.

- c. Adherence to Surviving sepsis guidelines in your ICU.
  - d. Incidence of acute kidney injury according to KDIGO in your ICU.
  - e. Quality of nutrition in your ICU (which route, how fast, how much etc.).
4. Prospective development project.
- Comprehensive review article on an ICU relevant topic, for example: Treatment of sepsis, Tight glucose control, Hypothermia after traumatic brain injury, Steroids in ICU patients. Such review must be based on a comprehensive literature review.

### **Preparation – presentation - endorsement**

1. **Project Topic and Design:** The project topic and design as well as project tutor must be a part of the application to the program. A PowerPoint presentation with 5-6 slides should be prepared about the proposed project to be presented at the first course held in Uppsala-Stockholm. The presentation should include: Title, authors, aim and method. The national representatives may assist in this matter if requested.
2. **Ethical approval:** The project must be performed in accordance with the Helsinki Declaration and if applicable, permission must be obtained from the appropriate ethics committee and other relevant authorities before starting the data collection.
3. **Abstract for the last course presentation:** Write a 250-500 words abstract - deadline August 1<sup>st</sup>, 2026 - in accordance with the Acta Anaesthesiologica Scandinavica <https://onlinelibrary.wiley.com/page/journal/13996576/homepage/forauthors.html> and submit to the Reykjavik course director [martin@landspitali.is](mailto:martin@landspitali.is) with a cc to your national representative(s) in the Steering Committee.
4. **PPT Presentation:** Prepare a 15 min PowerPoint presentation of the ICU Project to be presented and evaluated during the Reykjavik course. The PowerPoint presentation should be submitted to the Reykjavik course director - deadline September 1<sup>st</sup>, 2026 - [martin@landspitali.is](mailto:martin@landspitali.is) with a cc to your national representative(s) in the Steering Committee.
5. **The language** is English.

During the last course, the best projects will be selected for presentation in an upcoming Nordic congress for which the registration fee may be offered by the program.

## **Appendix 3**

### **International Exchange**

The international exchange serves several purposes besides training in quality control. The aim is also to provide the candidates with a competence in adapting and transferring new treatment modalities from other units, and to learn about differences in logistics, organisation and routines between different countries. The duration of the exchange period and the salary may be negotiated by the host clinic(s) representative(s) and the trainee, thus allowing flexibility regarding costs containment and available resources.

The international rotation is traditionally a rotation of not less than 3 months at an ICU in another country and the Steering Committee strongly supports that tradition.

This may be transformed into 2 auscultation periods of 2 weeks at 2 different units in different countries.

The third alternative is a one-week auscultation period in presence at the unit during not less than 5 full working days, accompanied by a written report to the national representative(s) and accompanied by an oral presentation at the home department approved and certified by the tutor. It is advisable that such a report focuses upon specific tasks where a comparison between the home unit and the visited unit may be of special interest.

The host clinic(s) and the trainee will cooperate with the national representative(s) of the Steering Committee in organizing an exchange program.

## Appendix 4

### Courses of the SSAI advanced educational program in Intensive Care Medicine 2025-2026

Time	Site (venue will be specified later)	Organizer
2025 January 27-30	<b>Stockholm / Uppsala, Sweden</b>	Prof. Sten Rubertsson <a href="mailto:sten.rubertsson@uu.se">sten.rubertsson@uu.se</a> Prof. Miklos Lipcsey <a href="mailto:miklos.lipcsey@uu.se">miklos.lipcsey@uu.se</a> Dr. Anna Somell <a href="mailto:anna.somell@regionstockholm.se">anna.somell@regionstockholm.se</a>
2025 May 6-9	<b>Copenhagen, Denmark</b>	Prof. Morten H. Bestle <a href="mailto:morten.bestle@regionh.dk">morten.bestle@regionh.dk</a> Dr. Meike Tomesch Behzadi <a href="mailto:meike.tomesch@rn.dk">meike.tomesch@rn.dk</a> Dr. Sigurdur Sigurdsson <a href="mailto:sigurdur.thor.sigurdsson@regionh.dk">sigurdur.thor.sigurdsson@regionh.dk</a>
2026 January 20-23	<b>Tampere, Finland</b>	Prof. Johanna Hästbacka <a href="mailto:johanna.hastbacka@tuni.fi">johanna.hastbacka@tuni.fi</a> Prof. Matti Reinikainen <a href="mailto:matti.reinikainen@uef.fi">matti.reinikainen@uef.fi</a>
2026 April 20-23	<b>Oslo, Norway</b>	Prof. Tor Inge Tønnessen <a href="mailto:t.i.tonnessen@medisin.uio.no">t.i.tonnessen@medisin.uio.no</a> Assoc. Prof. Sören Pischke <a href="mailto:s.e.pischke@medisin.uio.no">s.e.pischke@medisin.uio.no</a>
2026 Sep 2-5	<b>Reykjavik, Iceland</b>	Prof. Martin Ingi Sigurdsson, <a href="mailto:martin@landspitali.is">martin@landspitali.is</a> Dr. Katrin Thormar <a href="mailto:kata@landspitali.is">kata@landspitali.is</a>

## Appendix 5

### SSAI-IC AEP Steering Committee

#### Chair

- Assoc. Prof. Christian Rylander, Uppsala University Hospital, Sweden, [christian.rylander@uu.se](mailto:christian.rylander@uu.se), phone +46 736 60 14 75

#### Finland

- Prof. Johanna Hästbacka, Tampere University Hospital, Finland [johanna.hastbacka@tuni.fi](mailto:johanna.hastbacka@tuni.fi)

#### Iceland

- Prof. Martin Sigurdsson, Landspítali University Hosp, Reykjavik, Iceland, [martin@landspitali.is](mailto:martin@landspitali.is)
- Dr. Katrín María Þómar, Landspítali University Hosp, Reykjavik, Iceland, [kata@landspitali.is](mailto:kata@landspitali.is)

#### Sweden

- Prof. Sten Rubertsson, Uppsala University Hospital, Sweden, [sten.rubertsson@uu.se](mailto:sten.rubertsson@uu.se)
- Prof. Miklos Lipcsey, Uppsala University Hospital, Sweden, [miklos.lipcsey@uu.se](mailto:miklos.lipcsey@uu.se)
- Dr. Anna Somell, Karolinska University Hospital, Huddinge, Sweden, [anna.somell@regionstockholm.se](mailto:anna.somell@regionstockholm.se)
- Dr Rosa Vieweg, Linköping University Hospital, Sweden, [rosavieweg@regionostergotland.se](mailto:rosavieweg@regionostergotland.se)

#### Denmark

- Prof. Morten H. Bestle, Copenhagen University Hospital – North Zealand, University of Copenhagen, Denmark, [morten.bestle@regionh.dk](mailto:morten.bestle@regionh.dk)
- Dr. Meike Tomesch Bezhadi, Aalborg University Hospital, Ålborg, Denmark, [meike.tomesch@rn.dk](mailto:meike.tomesch@rn.dk)
- Dr Sigurdur Sigurdsson, Rigshospitalet, Copenhagen, Denmark, [sigurdur.thor.sigurdsson@regionh.dk](mailto:sigurdur.thor.sigurdsson@regionh.dk)

#### Norway

- Prof. Tor Inge Tønnessen, Oslo University Hospital, Norway, [t.i.tonnessen@medisin.uio.no](mailto:t.i.tonnessen@medisin.uio.no)
- Assoc. Prof. Sören Pischke, Oslo University Hospital, Norway, [s.e.pischke@medisin.uio.no](mailto:s.e.pischke@medisin.uio.no)

## Appendix 6

### Application for the SSAI-IC Diploma, SDIC

**Completed 2-year training in different clinic(s):**

.....from.....to.....

.....from.....to.....

.....from.....to.....

.....from.....to.....

**Participation in SSAI-IC courses:**

*Stockholm/Uppsala, Sweden*                      *Date: .....*

*Copenhagen, Denmark*                      *Date: .....*

*Tampere, Finland*                      *Date: .....*

*Oslo, Norway*                      *Date: .....*

*Reykjavik, Iceland*                      *Date: .....*

**Completed "ICU project"    Presentation...date.....**

**Project title: .....**

**EDIC I .....date      EDIC II.....date    Attach copy of diploma!**

**Completed clinical exchange program in another country**

Clinic.....from.....to.....

Clinic.....from.....to.....

**Membership in SSAI from.....to.....**

Date: .....

Date: .....

.....  
**Trainee**

.....  
**Head of department**