



TECHNICAL DOCUMENT

Catalogue of infection control and hospital hygiene courses in the European Union

2016

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ECDC TECHNICAL DOCUMENT

Catalogue of infection control and hospital hygiene courses in the European Union

2016



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Contents

Abbreviationsiv
Executive summary1
Background 2
Evaluation process2
Presentation of the catalogue4
References
Course listings
Training and continuing education in hospital hygiene/infection control for doctors
Prevention and control of healthcare-associated infections
Certified course on infection prevention and control in healthcare facilities
Infection prevention and control
Specialisation studies for hygiene nurse
Nosocomial infections and hospital hygiene11
Healthcare-associated infections and hospital hygiene12
Antibiotic stewardship course
Infection control and patient safety14
Epidemiology of nosocomial infections15
Master of science in healthcare infection management16
Postgraduate certificate in health protection – campus based (CKU02)
Postgraduate certificate in health protection – online (CKU13)18
Postgraduate diploma in public health (health protection)19
Master of public health (CKX11)
Post-graduate diploma (infection prevention and control nursing)21
Master of science in infection prevention and control nursing 22
Healthcare-associated infections management/control
Epidemiological surveillance of healthcare-associated infections
Infection prevention and control
Hygiene and infection prevention in healthcare
Infection control in healthcare facilities
Hospital hygiene postgraduate course
Antimicrobial resistance and stewardship in healthcare associated infection control

Abbreviations

ABS	Applied antibiotic stewardship
AMR	Antimicrobial resistance
CS	Core staff
ECTS	European Credit Transfer and Accumulation System
EEA	European Economic Area
EU	European Union
EUNETIPS	European Network to Promote Infection Prevention for Patient Safety
HAI	Healthcare-associated infection
HCWs	Healthcare workers
IC	Infection control
ICA	Infection control activities
IC/HH	Infection control/hospital hygiene
ICUs	Intensive care units
IPC	Infection prevention and control
IELTs	International English Language Testing System
MD	Medical doctor
MDRO	Multidrug-resistant organisms
MSc	Master of science degree
NMBI	Nursing Midwifery Board of Ireland
PM	Programme management
QI	Quality improvement
RE	Review expert
SI	Surveillance and Investigation of HAI
TRICE	Training in Infection Control in Europe project
TRICE-IS	Training in Infection Control in Europe – implementation strategy project

Executive summary

The harmonisation of training programmes for infection control/hospital hygiene (IC/HH) professionals in Europe was emphasised by European Council recommendation 2009/C 151/01 of 9 June 2009 on patient safety, including the prevention and control of healthcare associated infections and a number of related documents [1-3].

To meet this challenge, ECDC launched, in 2012, a project entitled 'Training infection control in Europe – implementation strategy' (TRICE–IS) which promotes the standardisation of IC/HH courses in EU, EEA and EU enlargement countries, in agreement with the 'Core competencies for IC/HH professionals in the European Union', a set of competencies developed in an earlier project ('Training Infection Control in Europe', TRICE) and published by ECDC as a technical document in March 2013. [4].

One of the outputs of the TRICE–IS project is the development of a catalogue of available European IC/HH courses conducted in accordance with the European IC/HH core competencies mentioned above [4].

This document assembles a catalogue of 24 IC/HH courses submitted after the first European call for course submissions in January 2014.

The evaluation process followed the rules of an independent review process. To be eligible for evaluation, an IC/HH course had to meet seven defined inclusion and two exclusion criteria as well as two sets of evaluation criteria (eight essential and 18 desirable) [5].

The submitted courses had to be taught in either English or another European language. For the latter option, the course provider had to submit an extended abstract in English.

Providers of the submitted IC/HH courses were guaranteed confidentiality for the provided documentation.

After the evaluation process, 24 IC/HH courses (one of which is not currently offered) were included in the catalogue.

This catalogue of available IC/HH courses provides the first list of evaluated training programmes in IC/HH in EU, EEA and EU enlargement countries. Courses were submitted by providers and classified in accordance with a set of agreed criteria [6], resulting in an overview of different training options currently available in Europe.

This is, however, not an exhaustive list of existing training opportunities in EU, EEA and EU enlargement countries. Periodic calls for IC/HH courses are needed to ensure that this course catalogue remains up to date and to encourage other providers to submit their courses for evaluation and inclusion.

This course listing can be used as a guide to support healthcare workers (HCWs) and healthcare organisations in selecting European IC/HH courses that suit their training needs.

This catalogue may also serve as a point of reference for European countries to initiate, promote, restructure or reorient training initiatives for IC/HH professionals and to improve the quality of courses: the criteria used for the course listings are available to training providers in all EU, EEA and EU enlargement countries.

Despite differences in IC/HH training programmes in European countries, the agreed process for evaluating IC/HH courses and the availability of an up-to-date catalogue of existing training initiatives, supports and reinforces efforts to increase IC/HH capacity in the EU, EEA and EU enlargement countries.

Background

The harmonisation of training programmes for infection control/hospital hygiene (IC/HH) professionals across Europe is stressed by European Council recommendation 2009/C 151/01 of 9 June 2009 and a subsequent European Commission's report [1,2]. These documents stress the need for coordinated efforts in the field of prevention and control of healthcare-associated infections (HAI) at all levels and emphasise the central role of healthcare workers (HCWs). This is also in accordance with the 'Council conclusions on patient safety and quality of care, including the prevention and control of healthcare associated infections and antimicrobial resistance' of 1 December 2014 [3], which confirmed the importance of topics such as infection prevention and control (IPC), reduction of antimicrobial resistance (AMR), and training of professionals to ensure healthcare quality and safety.

Understanding the current trends in IC/HH training for HCWs in Europe is essential for the definition and implementation of policies and programmes aimed to increase and harmonise capacity and training in IC/HH across Europe.

A survey conducted in 2010 as part of the ECDC project TRICE identified an increased commitment to prevent and control HAIs in Europe but also pointed at the differences in IC/HH qualifications of HCWs and in the sustainability of IC/HH training initiatives between countries [6].

In 2012, ECDC started the TRICE–IS project which was designed to specifically promote the process of implementation and harmonisation of IC/HH initiatives and tools, in accordance with the 'Core competencies for IC/HH professionals in the European Union' [4]. The main objectives of the TRICE–IS project included: providing an updated assessment on the status of capacity and training needs in IC/HH available in Europe; developing an IC/HH wiki for trainers and trainees; developing a catalogue of IC/HH training courses in Europe that are conducted in accordance with European IC/HH core competencies [4].

This document assembles a catalogue of IC/HH courses submitted in the first call for courses launched within the TRICE–IS project in January 2014. The reported courses underwent a process of evaluation based on an agreed set of criteria [5] with the engagement of experts in the field of IC/HH and in accordance with the European IC/HH core competencies [4].

Evaluation process

The evaluation process followed the rules of an independent review process. To be eligible for evaluation, an IC/HH course had to meet seven defined inclusion and two exclusion criteria as well as two sets of evaluation criteria (eight essential and 18 desirable) [5]. The course language had to be either English or another European language (with an extended abstract in English). Confidentiality was guaranteed.

The process that led to the development of this catalogue comprised the following steps.

Engagement of Member State experts in the planning of the evaluation process during the first meeting of Member State experts held in Venice on 17–18 June 2013.

Selection and nomination of eight review experts (REs) identified among European IC/HH professionals with expertise on IC/HH training and with the main task of evaluating the submitted courses. The selected experts included different professional profiles (doctors, nurses), had teaching experience in IC/HH, and were proficient in spoken and written English.

Agreement on the evaluation process was reached after the first RE meeting held in Stockholm on 9 September 2013; it included the following principles:

- the process would follow the rules of an independent review
- to be eligible for evaluation, the course had to meet defined inclusion and exclusion criteria [5]. These criteria had to be completely met in order to proceed with the evaluation process
- the evaluation was based on two sets of evaluation criteria [5], defined as:
 - essential: criteria had to be completely met; if missing, the course was not reviewed
 - desirable: criteria were evaluated but an IC/HH course was not automatically excluded from the catalogue if missing.
- the course language should be either English or another European language (in which case an extended abstract in English was requested);
- the process guaranteed confidentiality for the submitted documentation.

Pilot testing of the evaluation process

An analysis of one course was used as an example to test the whole evaluation process which focused on the inclusion, exclusion and evaluation criteria [5].

Launch of the call for the evaluation of IC/HH courses

The call for course evaluation was launched after the final revision of:

- two forms for submission of courses for evaluation
 - Form A: 'Course/training initiatives for providers' (Annex 1)
 - Form B: 'European IC/HH core competencies for providers' (Annex 2)
- a booklet with instructions on how to complete the forms
- a simplified flow chart summarising all steps of the evaluation process.

The call for the evaluation of IC/HH courses within the TRICE–IS project was launched on 7 December 2013 and ended on 30 January 2014.

The launch of the call was accompanied by an invitation letter addressed by ECDC to all Member State experts designated by EU and EEA Member States and EU enlargement countries.

In parallel, a notice about the call was sent to national, professional and scientific societies engaged in IC/HH through networks such as EUNETIPS (European network to promote infection prevention for patient safety).

A contact person answered all requests for information or documentation.

Evaluation of IC/HH courses

The IC/HH course evaluation process started in February 2014 adopting the following principles agreed with ECDC:

- Selection of the course by date of submission
- Assignment of each IC/HH course to two REs; REs did not evaluate the courses from their own country
- Assignment of IC/HH courses to TRICE–IS core staff members who volunteered to support the process and acted as REs
- All submitted courses had to be fully evaluated before giving feedback to their providers.

All REs and TRICE–IS core staff received for the evaluation:

- materials about the assigned courses
- two forms to complete
- an instruction booklet to ensure standardisation and facilitate the evaluation process.

If there were disagreements between the REs and TRICE–IS core staff members regarding criteria defined as essential [5], the course documentation was sent to other REs or TRICE–IS core staff members for an objective third evaluation before the final decision.

Agreement on the structure of the IC/HH course catalogue

During the 2nd meeting of REs (Berlin, 3–4 March 2015) and the 2nd meeting of Member State experts (Madrid, 28–29 September 2015), the characteristics of the catalogue were defined and agreed.

Validation of each IC/HH course profile by its provider

Phase 1. In January 2016, providers of IC/HH courses that met the relevant criteria [5] were informed by the project coordinator that their IC/HH course had been positively evaluated and would therefore be included in a catalogue that will be published on the ECDC website.

In the letter, course providers were asked to check all data and provide the following additional information:

- Information about whether the IC/HH course was still offered
- Date of the last edition of the IC/HH course
- Date of the next edition
- Type of certification offered
- Email address for information
- Course website (if available)

Phase 2. In February 2016, providers of IC/HH courses that had met all relevant criteria [5] were contacted for clarification regarding any incomplete or lacking information.

Following this, the final version of the profile of each IC/HH course was released.

The profile of each IC/HH course (see Course listings on page 6) includes the information reported in Table 1.

Table 1. Course profile template of IC/HH courses included in the catalogue

Characteristics of IC/HH courses
Title of IC/HH course
Country and institution that offers the course
Language used to deliver the course content/assessment
Target groups and pre-requisites
Course duration, hours and, if offered, European credit transfer and accumulation system (ECTS)
Availability of distance learning
Availability of fellowships or grants
Type/level of certification provided by the course
Frequency with which the course is held
Date of last edition and date of next edition
Summary of the outcomes of the course
Areas of 'Core competencies for infection control and hospital hygiene professionals in the European Union' covered by the course
Course website address
E-mail address contact

Presentation of the catalogue

In accordance with Council recommendation of 9 June 2009 on patient safety, including the prevention and control of healthcare associated infections (2009/C 151/01) and subsequent Council conclusions [1,2], ECDC initiated the TRICE–IS project aimed at promoting the standardisation of IC/HH courses within the EU using the European IC/HH core competencies [4] in order to support sharing of IC/HH training resources and mutual recognition of IC/HH training courses within EU, EEA and EU enlargement countries.

The current catalogue of available IC/HH courses contributes to this objective by providing a list of training programmes for IC/HH within the EU, EEA and EU enlargement countries which were classified according to agreed criteria [5].

The catalogue can therefore be considered as the first example of a European resource for supporting training in the field of IC/HH. Moreover, the catalogue can be used as a guide to support HCWs and healthcare organisations (as employers) in selecting the most suitable IC/HH courses offered in EU, EEA and EU enlargement countries.

Due to the inclusion of common criteria [5] which are available to all healthcare providers and educational institutions in the EU, this catalogue could also serve as a reference point for European countries to promote, restructure or reorient training initiatives for IC/HH professionals, helping to improve the quality of care provided to patients and institutional performance.

The course listings in this catalogue include only IC/HH courses (24 IC/HH courses in 15 EU Member States) that received a positive evaluation based on the TRICE–IS methodology. The catalogue only includes courses that were held at least once over the last three years (2012–2014).

These IC/HH courses are mostly targeted to medical doctors, nurses and other professionals (17/24; 71%). In five (21%) of the courses, the attendees were only nurses; in two (8%) of the courses, medical doctors were the only group of participants.

The catalogue also includes the Nordic School of Public Health 'Infection prevention and control' course; this course was held within the submission deadline for this publication, but is currently not offered.

Finally, it should be stressed that this catalogue includes only IC/HH training courses that were submitted voluntarily by providers at the beginning of 2014 and that it cannot be considered exhaustive.

For this reason, periodic calls for IC/HH courses are required to ensure an updated list of available training initiatives and invite other providers to submit their courses for evaluation.

Despite the significant differences in IC/HH training programmes among European countries, the availability of an agreed process for the evaluation of IC/HH courses and the publication of an easily accessible catalogue of existing IC/HH training courses, supports and reinforces the efforts to harmonise and increase IC/HH capacity in EU, EEA and EU enlargement countries.

References

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- 5. Brusaferro S, Arnoldo L, Cattani G, Fabbro E, Cookson B, Gallagher R, et al. Harmonizing and supporting infection control training in Europe. J Hosp Infect. 2015 Apr;89 (4): 351-6.
- Brusaferro S, Cookson B, Kalenic S, Cooper T, Fabry J, Gallagher R et al. Training infection control and hospital hygiene professionals in Europe: agreed core competencies among 33 European countries. Euro Surveill 2014;19 (49): pii=20985 (accessed 29 September 2016).

Course listings

Training and continuing education in hospital hygiene/infection control for doctors

Institution

Austrian Society of Hygiene, Microbiology and Preventive Medicine Austria

Course characteristics			
Language	German		
Target population	MDs		
Pre-requisites	Certified MDs who work in healthcare institutions		
Duration: hours (ECTS)	80 hours (2.5 ECTS)		
Possibility of distance learning	Partially (additional assignments to compensate for class sessions)		
Fellowships or grants available	No		
Type of certification	Diploma of the Austrian Physicians' Association		
Course editions			
Frequency	Every other year		
Last edition	March 2014–September 2014		
Next edition	March 2016–September 2016		
Learning objectives			
Specific outcomes	 To become familiar with theoretical and practical basics of IC/HH, to prevent, identify and control nosocomial infections; To be able to act on behalf of infection control (IC) issues, e.g. outbreaks, guidelines of infection control measures, etc. 		
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities 		
Website and contact information			
Website	http://oeghmp.at/pages/fortbildung.php		
Contact	oeghmp@media.co.at		

Prevention and control of healthcare-associated infections

University of Zagreb, School of Medicine Croatia

Course characteristics			
Language	Croatian		
Target population	MDs and nurses		
Pre-requisites	MDs: all specialties; nurses: bachelor degree		
Duration: hours (ECTS)	300 hours (17 ECTS)		
Possibility of distance learning	No		
Fellowships or grants available	No		
Type of certification	Certificate from the University of Zagreb, School of Medicine		
Course editions			
Frequency	Every other year		
Last edition	March 2015–October 2015		
Next edition	March 2017-October 2017		
Learning objectives			
Specific outcomes	 To define the role of MDs, nurses and team members responsible for infection control, modes of transmission, incubation, resistance of different microorganisms To become familiar with rules and regulations, methods and principles used in infection control To learn basics of sterilisation, disinfection, and hygiene in healthcare institution, basic statistical methods used in infection control To be able to apply measures for HAI prevention and control, infection control education of HCWs To master the skills of management and communications in prevention and control of HAI. 		
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities 		
Website and contact information			
Website	http://www.mef.unizg.hr http://www.hdkm.hr		
Contact	abudimir@kbc-zagreb.hr		

Certified course on infection prevention and control in healthcare facilities

Institution			
Charles University in Prague Czech Republic			
Course characteristics			
Language	Czech		
Target population	Nurses		
Pre-requisites	Bachelor's or Master's degree, 3 years of bedside practice		
Duration: hours (ECTS)	210 hours		
Possibility of distance learning	No		
Fellowships or grants available	No		
Type of certification	Certificate from the Ministry of Health		
Course editions			
Frequency	Every other year		
Last edition	September 2015–January 2017		
Next edition	September 2016–January 2018		
Learning objectives			
Specific outcomes	 Under supervision: surveillance of HAI, outbreak investigation, organisation of measures in serious epidemiological events, identification and assessment of HAI risk factors; Without supervision: evaluation and implementation of good practice measures in nursing care; implementation of evidence-based infection control procedures. 		
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities 		
Website and contact information			
Website	http://www.lf3.cuni.cz/cs/pracoviste/osetrovatelstvi/kurzy/		
Contact	vlastimil.jindrak@szu.cz; nrc-hai@szu.cz		

Infection prevention and control¹

Institution

Nordic School of Public Health

Åland Islands, Denmark, Faroe Islands, Finland, Norway, Iceland, Greenland, Sweden

Aland Islands, Denmark, Faroe Islands	, Finland, Norway, Iceland, Greenland, Sweden		
Course characteristics			
Language	Scandinavians languages (Danish, Norwegian and Swedish) or English. The official language is Scandinavian.		
Target population	MDs, nurses, pharmacists and lab technicians		
Pre-requisites			
Duration: hours (ECTS)	25 ECTS		
Possibility of distance learning	Yes		
Fellowships or grants available	No		
Type of certification	Certificate from the Nordic School of Public Health		
Course editions			
Frequency	The course ended on 31 December 2014.		
Last edition			
Next edition			
Learning objectives			
Specific outcomes	 To understand the generation of immune response to vaccines; describe different kinds of vaccines and their principal advantages and disadvantages To become familiar with Nordic and international vaccination programmes and explain their importance for public health To become familiar with the pre-requisites for the control or elimination of global infectious diseases (such as malaria, HIV, tuberculosis, hepatitis B, gastrointestinal infections) with vaccination To become familiar with the main groups of antibiotic agents, their mode of action, and understand the relation between antibiotic use and development of resistance To become familiar with mechanisms of resistance, methods for determination and surveillance of resistance To become familiar with IPC methods in order to prevent HAIs, relevant to the students' professional backgrounds, their functions and job responsibilities. 		
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities 		
Website and contact information			
Website	http://www.norden.org/en/nordic-council-of-ministers/council-of- ministers/nordic-council-of-ministers-for-health-and-social-affairs-mr- s/institutions-and-co-operative-bodies/institutions/nordic-school-of- public-health-nhv-1953-2014		
Contact	-		
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 $^{^{\}rm 1}$ Course currently not running.

Specialisation studies for hygiene nurse

Institution

Arcada University of Applied Sciences Finland

Finland			
Course characteristics			
Language	Finnish		
Target population	Nurses		
Pre-requisites	Nurse diploma, working experience of infection control 1-2 years		
Duration: hours (ECTS)	810 hours (30 ECTS)		
Possibility of distance learning	Yes		
Fellowships or grants available	No		
Type of certification	Official certificate from Arcada University of Applied Sciences		
Course editions			
Frequency	Yearly		
Last edition	September 2015–May 2016		
Next edition	September 2016–May 2017		
Learning objectives			
Specific outcomes	 To train experts who are able to teach and guide in the field of medical care; taking advantage of multi-disciplinary timely information and display basic research To become familiar with disease surveillance, registration and early detection of potential outbreaks. 		
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities 		
Website and contact information			
Website	https://fortbildning.arcada.fi/fi-FI/Education/Details/172		
Contact	marika.blomster@arcada.fi		

Nosocomial infections and hospital hygiene

Institution

Pierre-and-Marie Curie University Paris V, René Descartes University Paris VI, Denis Diderot University Paris VII France Course characteristics

Course characteristics			
Language	French		
Target population	Infection control practitioners, nurses, and risk managers		
Pre-requisites	Job experience as senior nurse, midwife, MD or pharmacist. Interns are allowed to attend.		
Duration: hours (ECTS)	110 hours (8 ECTS)		
Possibility of distance learning	No		
Fellowships or grants available	No		
Type of certification:	University diploma		
Course editions			
Frequency	Yearly		
Last edition	January–June 2016		
Next edition	January–June 2017		
Learning objectives			
Specific outcomes	 Understand basic concepts in infection control Be able to promote infection control programmes Be able to investigate hospital outbreaks Understand how to implement HAI surveillance Be able to interpret epidemiological data Be able to implement practice assessments in hygiene Be able to communicate infection control concepts. 		
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities 		
Contacts and web information			
Website	www.cclinparisnord.org		
Contact	secretariat.astagneau@aphp.fr		

Healthcare-associated infections and hospital hygiene

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Institution			
University of Lorraine France			
Course characteristics			
Language	French		
Target population	Risk managers		
Pre-requisites	Job experience as senior nurse, midwife, MD or pharmacist. Interns are allowed to attend		
Duration: hours (ECTS)	182 hours (27 ECTS)		
Possibility of distance learning	Available since September 2016		
Fellowships or grants available	No		
Type of certification	Diploma		
Course editions			
Frequency	Yearly		
Last edition	October 2015–April 2016		
Next edition	October 2016–April 2017		
Learning objectives			
Specific outcomes	 Understand and becomefamiliar with basic concepts in infection control Be able to implement and promote infection control programmes in hospitals Be able to implement HAI surveillance, investigate hospital outbreaks and interpret microbiological and epidemiological data Be able to implement audits and practice assessments in hygiene. 		
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities 		
Website and contact information			
Website	http://www.e-eohh.fr		
Contact	arnaud.florentin@univ-lorraine.fr		

Antibio	TIC CTOWA	rdship course	
AILUDIO	lig Slewai	I USIIID CUUISE	1

Institution

Deutsche Gesellschaft für Krankenhaushygiene (DGKH) Germany

Course characteristics	
Language	German
Target population	MDs and pharmacist
Pre-requisites	Specialists in infectious diseases, microbiology, internal medicine, intensive care, and surgery
Duration: hours (ECTS)	160 hours
Possibility of distance learning	Yes (40 hours)
Fellowships or grants available	No
Type of certification	'Certified antibiotic stewardship expert', awarded by the German Society of Hospital Hygiene
Course editions	
Frequency	Twice a year
Last edition	February–July 2016
Next edition	February–July 2017
Learning objectives	
Specific outcomes	 Knowledge of principles of antibiotic treatment: pharmacology, microbiology: susceptibility testing, resistance, pre-analytic management Principles of appropriate antibiotic use: indication, duration, response-control, escalation/de-escalation strategies Evidence-based antibiotic management of all important infections, skills to apply relevant guidelines Familiarity with applied antibiotic stewardship (ABS): case reviews, audits, ABS interventions, surveillance of antibiotic use, control of ABS effects.
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities
Website and contact information	
Website	http://www.antibioticstewardship.de
Contact	info@congress-compact.de

Infection control and patient safety

Institution	
University of Debrecen Hungary	
Course characteristics	
Language	Hungarian
Target population	MDs, nurses, pharmacists and dentists
Pre-requisites	University degree and full-time job in the healthcare system; three years of experience or more
Duration: hours (ECTS)	30 hours (5 ECTS)
Possibility of distance learning	No
Fellowships or grants available	No
Type of certification	Certificate of successful completion of the course
Course editions	
Frequency	Announced yearly
Last edition	May 2014
Next edition	According to demand
Learning objectives	
Specific outcomes	 Knowledge of infection control cornerstones Implementation of infection control in the ICUs Implementation of infection control in other departments Understanding of legal aspects of HAIs in Hungary Application of other elements of patient safety.
European IC/HH core competencies covered	Programme managementInfection control activities
Contacts and web information	
Website	www.nk.unideb.hu
Contact	orosip@med.unideb.hu

Epidemiology of nosocomial infections

Institution

Semmelweis University, Faculty of Health Sciences – Department of Epidemiology Hungary

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Course characteristics	
Language	Hungarian
Target population	Public health inspectors
Pre-requisites	Passing grade in the final exam of the course 'Basic epidemiology and hygiene'
Duration: hours (ECTS)	90 hours (3 ECTS)
Possibility of distance learning	No
Fellowships or grants available	No
Type of certification	At the end of their university studies, students receive a diploma which entitles them to carry out infection control activities
Course editions	
Frequency	Yearly
Last edition	February 2016–May 2016
Next edition	February 2017–May 2017
Learning objectives	
Specific outcomes	 Management of infection control in hospitals Analysis of microbial surveillance data Control of patient safety Prevention of HAI.
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities
Website and contact information	
Website	-
Contact	barcsi@se-etk.hu

Master of science in healthcare infection management

Institution	
Trinity College Dublin Ireland	
Course characteristics	
Language	English
Target population	MDs, nurses, pharmacists, lab technicians
Pre-requisites	 Applications will be considered from those who hold: a medical degree a degree in biomedical sciences, nursing, pharmacy, microbiology, or a relevant science subject.
Duration: hours (ECTS)	60 ECTS over 12 or 24 months, consisting of taught classes (160–200 hours) and a research project (480 hours)
Possibility of distance learning	No
Fellowships or grants available	No
Type of certification	Master's in Science (MSc) from Trinity College Dublin
Course editions	
Frequency	Yearly
Last edition	October 2015–September 2016
Next edition	October 2016–September 2017
Learning objectives	
Specific outcomes	 Epidemiology and virulence mechanisms of pathogens causing HAI Major types of antibiotics and resistance mechanisms employed by pathogens Infection control policies and strategies Current research methodology.
European IC/HH core competencies covered	 Programme management Surveillance and investigation of healthcare-associated infections Infection control activities
Website and contact information	
Website	http://www.medicine.tcd.ie/msc-him/
Contact	mscmicro@tcd.ie; miajlovh@tcd.ie

Postgraduate certificate in health protection – campus based

Institution	
University College Cork Ireland	
Course characteristics	
Language	English
Target population	MDs, nurses, pharmacists, lab technicians
Pre-requisites	An appropriate degree or professional qualification in healthcare or health services management (such as registered nurses, pharmacists, midwives, health services managers)
Duration: hours (ECTS)	140 hours of contact time (30 ECTS)
Possibility of distance learning	Yes, on a partner certificate
Fellowships or grants available	Yes
Type of certification	Postgraduate certificate awarded by the University College of Cork, Department of Epidemiology and Public Health, and the National University of Ireland.
Course editions	
Frequency	Yearly
Last edition	January–May 2016
Next edition	January–May 2017
Learning objectives	
Specific outcomes	 Demonstrate an understanding of infection management Investigate the transmission of endemic and epidemic infections Select appropriate methods for the control of hospital- and community-acquired infectious diseases Design, implement and evaluate coordinated control methods Describe the global impact of infectious diseases and identify strategies which are effective, partially effective and ineffective in management and prevention.
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities
Website and contact information	
Website	http://www.ucc.ie/en/cku02/
Contact	m.smiddy@ucc.ie

Postgraduate certificate in health protection – online

Institution

University College Cork Ireland	
Course characteristics	
Language	English
Target population	MDs, nurses, pharmacists, lab technicians
Pre-requisites	An appropriate degree or professional qualification in healthcare or health services management (such as registered nurses, pharmacists, midwives, health services managers).
Duration: hours (ECTS)	140 hours of contact time (30 ECTS)
Possibility of distance learning	Yes, online course
Fellowships or grants available	Yes
Type of certification	Post-graduate certificate awarded by the University College of Cork, Department of Epidemiology and Public Health, and the National University of Ireland
Course editions	
Frequency	Yearly
Last edition	January–May 2016
Next edition	January–May 2017
Learning objectives	
Specific outcomes	 Demonstrate an understanding of infection management Investigate the transmission of endemic and epidemic infections Select appropriate methods for the control of hospital- and community-acquired infectious diseases Design, implement and evaluate coordinated control methods Describe the global impact of infectious diseases Discuss the wider aspects of health protection.
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities
Website and contact information	
Website	http://www.ucc.ie/en/cku13/
Contact	fionabarry@ucc.ie

Postgraduate diploma in public health (health protection)

Institution	
University College Cork Ireland	
Course characteristics	
Language	English
Target population	MDs, nurses, pharmacists, lab technicians and other specialised professionals
Pre-requisites	Postgraduate qualification in a relevant field or evidence of at least two years' work experience in a relevant field.
Duration: hours (ECTS)	Over 300 hours contact time in addition to associated reading, reflection and study time (30 ECTS)
Possibility of distance learning	Yes
Fellowships or grants available	Yes
Type of certification	Postgraduate diploma awarded by the University College of Cork, Department of Epidemiology and Public Health, and the National University of Ireland.
Course editions	
Frequency	Yearly
Last edition	January–May 2016
Next edition	January–May 2017
Learning objectives	
Specific outcomes	 Critically analyse theories and issues related to public health Construct arguments around the social, political and economic factors determining the health of populations Demonstrate competence in the key underpinning disciplines and theories of public health Analyse and synthesise evidence and apply it to public health.
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities
Website and contact information	
Website	https://www.ucc.ie/en/ckw19/
Contact	m.smiddy@ucc.ie

Master of public health

Institution	
University College Cork Ireland	
Course characteristics	
Language	English
Target population	MDs, nurses, pharmacists, lab technicians and students
Pre-requisites	Students where English is not their mother tongue are required to complete their International English Language Testing System (IELTs) examination with a grade of 6.5 in all categories. Students accepted on the course would normally be expected to hold an honours primary degree in a relevant subject.
Duration: hours (ECTS)	300 hours of contact time (90 ECTS)
Possibility of distance learning	Yes
Fellowships or grants available	Yes
Type of certification	Master's certificate awarded by the University College of Cork, Department of Epidemiology and Public Health, and the National University of Ireland
Course editions	
Frequency	Yearly
Last edition	September 2015–September 2016
Next edition	January 2017–September 2018
Learning objectives	
Specific outcomes	 Critically analyse theories and issues related to public health Demonstrate competence in the key underpinning disciplines and theories of public health Analyse and synthesise evidence and apply it to public health Demonstrate logical reasoning in written work and discussion Employ a range of appropriate research and analysis methods with confidence and expertise.
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities
Website and contact information	
Website	https://www.ucc.ie/en/ckx11/
Contact	m.smiddy@ucc.ie

Post-graduate diploma (infection prevention and control nursing)

Institution

Royal College of Surgeons, School of Nursing and Midwifery Ireland

Course characteristics	
Language	English
Target population	Clinical nurses and midwives
Pre-requisites	Students who wish to join this programme must be active on the Nursing Midwifery Board of Ireland (NMBI) register. Students must have a level-8 qualification. Applicants who do not hold a level-8 qualification may still be eligible to join the programme through the School's pathway programme. Please contact the programme office for further information on this route. Students are required to log clinical practice hours relating to IPC throughout this programme.
Duration: hours (ECTS)	60 ECTS
Possibility of distance learning	No
Fellowships or grants available	No
Type of certification	Post-graduate diploma 'Infection prevention and control nursing'
Course editions	
Frequency	Yearly
Last edition	September 2015–September 2016
Next edition	September 2016–September 2017
Learning objectives	
Specific outcomes	 Critically evaluate IPC guidelines and discuss the principles of microbiology in the IPC Devise and update IPC guidelines based on national and international standards Critically evaluate administration and management systems for IPC including strategic planning for the IPC service Critically evaluate the use of information technology in the development and updating of IPC guidelines and procedures Critically discuss the principles preventing the spread of infection within the hospital and community Critically discuss the methods for investigating and controlling an outbreak of infection Critically discuss the use of surveillance methods in IPC.
European IC/HH core competencies covered	The ECDC core competencies for ICP professionals have been selected as the most suitable for students on this course to use for self- assessment of knowledge and skills. They are suggested as a guide from which to measure their knowledge and plan their learning needs. They are not part of the course competencies, which are signed off by NMBI as requirements for nurses/midwives studying at the post- graduate level.
Website and contact information	
Website:	http://www.rcsi.ie/nursing
Contact	nursing@rcsi.ie

Master of science in infection prevention and control nursing

Institution

Royal College of Surgeons Ireland School of Nursing and Midwifery Ireland

Course characteristics	
Language	English
Target population	Clinical nurses and midwives
Pre-requisites	Students who wish to join this programme must be active on the NMBI register. Students must have a level-9 qualification and have completed the postgraduate diploma in Infection Prevention and Control Nursing in the last 5 years.
Duration: hours (ECTS)	30 ECTS
Possibility of distance learning	No
Fellowships or grants available	No
Type of certification	MSc Infection Prevention and Control Nursing
Course editions	
Frequency	Yearly
Last edition	September 2015–September 2016
Next edition	September 2016–September 2017
Learning objectives	
Specific outcomes	 Critically discuss the ethical principles and theoretical underpinnings governing research practice/structured iterative reviews Demonstrate a comprehensive understanding of techniques and approaches in data collection, analysis and interpretation, in research and structured iterative reviews Prepare a protocol for the conduct of a research project or a structured iterative review Conduct a well-designed research project/structured iterative reviews Demonstrate the ability to produce a paper based on a critical analysis of a completed research project or iterative review that is ready for submission to an academic journal Demonstrate the ability to develop an abstract based on a critical analysis of their completed research project/iterative review that is ready for submission as a conference presentation.
European IC/HH core competencies covered	The ECDC core competencies for IPC professionals have been selected as the most suitable for students on this course to use for self- assessment of knowledge and skills. They are suggested as a guide only from which to measure their knowledge and plan their learning needs.
Website and contact information	
Website	http://www.rcsi.ie/nursing
Contact	nursing@rcsi.ie

Healthcare-associated infections management/control

Institution

Centre for the Continuous Training and Specialisation of Nurses Lithuania

Course characteristics	
Language	Lithuanian
Target population	Infection-control nurses
Pre-requisites	University or non-university education in the field of biomedical sciences, public health or nursing, or a corresponding title
Duration: hours (ECTS)	160 hours (10.6 ECTS)
Possibility of distance learning	No
Fellowships or grants available	No
Type of certification	Certificate from the Centre of continuous training and specialisation for nurses
Course editions	
Frequency	Not defined
Last edition	November 2014–December 2014
Next edition	November 2016–December 2016
Learning objectives	
Specific outcomes	 Perform control of HCW skills Analyse and evaluate the hygiene of healthcare institutions and infection prevention measures; monitor their performance.
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities
Website and contact information	
Website	http://www.sskc.lt/kompetenciju-ugdymas.html
Contact	centras@sskc.lt

Epidemiological surveillance of healthcare-associated infections²

Institution	
Institute of Hygiene Lithuania	
Course characteristics	
Language	Lithuanian
Target population	Infection control practitioners, specialists, epidemiologists, their assistants and other professional qualifications; MDs and nurses involved in HAI.
Pre-requisites	University or non-university education in the field of biomedical sciences, public health or nursing, or a corresponding title.
Duration: hours (ECTS)	64 hours (4.2 ECTS)
Possibility of distance learning	No
Fellowships or grants available	No
Type of certification	Certificate from the Lithuanian Institute of Hygiene
Course editions	
Frequency	Not defined (at least 15 participants)
Last edition	March 2016
Next edition	According to demand
Learning objectives	
Specific outcomes	 Ability to plan and carry out surveillance HAI Proficient user of EpiData software for HAI surveillance Ability to evaluate HAI situations, to identify high-risk locations and factors in healthcare institutions Collect, store, analyse and evaluate information needed for epidemiological surveillance.
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities
Website and contact information	
Website	http://www.hi.lt/paslaugos.html
Contact	institutas@hi.lt

² Since 2016 taught in two courses: 'Epidemiological surveillance of healthcare-associated infections in intensive care departments' and 'Continuous surveillance of surgical site infections in surgical departments'.

Intection	prevention and	control

Institution

Institution	
University of Malta Malta	
Course characteristics	
Language	English
Target population	All registered healthcare professionals, mainly for infection control nurses and midwives
Pre-requisites	Registered healthcare professionals
Duration: hours (ECTS)	30 hours of contact time (6 ECTS)
Possibility of distance learning	No
Fellowships or grants available	Course is free for participants (funded by the Maltese Ministry of Health)
Type of certification	Certificate issued by the University of Malta
Course editions	
Frequency	Yearly
Last edition	October 2015
Next edition	Scheduled to be held in October 2016
Learning objectives	
Specific outcomes:	 Know the key issues behind effective implementation of local IPC programmes Familiar with effective strategies for IPC Update knowledge about hand hygiene, isolation precautions and occupational infection risks Recognise the impact of antibiotic use in HAI Understand the impact of multidrug-resistant strains Understand the association between environment and HAI, and which interventions are effective to achieve reduction Understand the key issues behind cleaning, disinfection and sterilisation.
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities
Website and contact information	
Website	http://www.um.edu.mt/healthsciences
Contact	claire.a.farrugia@gov.mt

Hygiene and infection prevention in healthcare

Institution

Wenckebach Institute, University Medical Center Groningen Netherlands

Course characteristics		
Language	Dutch	
Target population	MDs, nurses, pharmacists, lab technicians and other specialised professionals with a post-graduate qualification in a relevant field	
Pre-requisites	Bachelor degree or above. A degree in a medical or microbiology-related subject is preferred.	
Duration: hours (ECTS)	375 hours	
Possibility of distance learning	No	
Fellowships or grants available	Yes	
Type of certification	Diploma certified by the College Zorg Opleidingen	
Course editions		
Frequency	Yearly	
Last edition	February 2015–February 2017	
Next edition	February 2016–February 2018	
Learning objectives		
Specific outcomes	 Professional conduct Communication Collaboration Knowledge and science Social conduct Membership of the organisation Professionalism. 	
European IC/HH core competencies covered	 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities 	
Website and contact information		
Website	www.wenckebachinstituut.nl	
Contact	a.k.westerhof@umcg.nl,t.t.jilesen@umcg.nl	

Infection control in healthcare facilities

Institution

Jagiellonian University, Medical College Poland

Course characteristics		
Language	Polish	
Target population	Infection control professionals (MDs, nurses and lab technicians).	
Pre-requisites	Graduate studies in the field of medicine, nursing, midwifery, sanitary inspections or other related fields.	
Duration: hours (ECTS)	180	
Possibility of distance learning	No	
Fellowships or grants available	No	
Type of certification	A certificate of completion of postgraduate studies issued by Jagiellonian University	
Course editions		
Frequency	Every other year	
Last edition	September 2014–June 2015	
Next edition	September 2016–June 2017	
Learning objectives		
Specific outcomes European IC/HH core competencies covered	 Obtain the skills of planning, introducing and evaluating programmes of infection control in healthcare settings, including: surveillance of HAI maintaining efficient aseptic techniques for healthcare practices development of guidelines and standardisation of effective preventive practices outbreak management training of HCWs assessment of compliance with the IPC practices assurance of procurement of adequate supplies. Programme management Quality improvement 	
Website and contact information	 Surveillance and investigation of healthcare-associated infections Infection control activities 	
Website	www.mckp.uj.edu.pl (zakładka Studia)	
Contact	studiamckp@uj.edu.pl	

Hospital hygiene postgraduate course

Institution

University of Ljubljana, in collaboration with the University Medical Centre Ljubljana Slovenia

Slovenian
MDs and nurses
Mandatory for IC/HH staff members
130 hours (8 ETCS)
No
No
Nationally valid certificate of completion of the postgraduate course in infection control; this certificate is legally required for professionals responsible for infection control in public health institutions.
Yearly (alternating between MDs and nurses)
February 2015–May 2015
February 2016–May 2016
 Legal aspects and regulations, audits of professional practices Management of outbreaks, infection control interventions, AMR, surveillance of multidrug-resistant organisms Decontamination and sterilisation of medical devices, controlling environmental sources of infections.
 Programme management Quality improvement Surveillance and investigation of healthcare-associated infections Infection control activities
http://www.imi.si/pedagoska-dejavnost-en/strokovna- izobrazevanja/bolnisnicna-higiena
tadeja.matos@mf.uni-lj.si

Antimicrobial resistance and stewardship in healthcare associated infection control

Institution	
University College London United Kingdom	
Course characteristics	
Language	English
Target population	Nurses, MDs, pharmacists and scientists working in the area of infection control and/or Antibiotic Stewardship (ABS).
Pre-requisites	Bachelor level or above. Degrees in healthcare or microbiology are preferred.
Duration: hours (ECTS)	150 hours (15 ECTS)
Possibility of distance learning	Yes
Fellowships or grants available	No
Type of certification	Partial fulfilment (1 module) of the postgraduate certificate (4 modules), diploma (8 modules), or MSc-level qualification (8 modules and thesis).
Course editions	
Frequency	Yearly
Last edition	October 2015
Next edition	October 2016
Learning objectives	
Specific outcomes	 Knowledge of epidemiology of AMR in different organisms; strategies for the control of antimicrobial prescribing and consumption; local, national and international approaches to develop standards and practices Understanding the issues relating to new drug development and alternative treatments, e.g. vaccines.
European IC/HH core competencies covered	Surveillance and investigation of healthcare-associated infectionsInfection control activities
Website and contact information	
Website	http://www.ucl.ac.uk/infectionimmunity/study/post_stu/pgrad_HAIC
Contact	ii.infection-immunityadmin@ucl.ac.uk

European Centre for Disease Prevention and Control (ECDC)

Postal address: Granits väg 8, SE-171 65 Solna, Sweden

Visiting address: Tomtebodavägen 11A, SE-171 65 Solna, Sweden

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