SPECIALTY :

Clinical Embryology



This document comprises a discipline-specific version of the general competence document and provides additional guidance as to how to complete the general document, Appendix 1 of the Guidelines, that you must submit with your application.

Remember that the aim of the process is for the candidate to satisfy the assessor that he or she has the appropriate basic qualifications and length of experience for issue of the Certificate of Attainment, and that the training programme/period of supervised practice has enabled the candidate to achieve the basic level of competence required for registration as a clinical scientist.

SPECIALTY :

EXPERIENCE:		The candidate should be able to demonstrate that he/she has worked in an environment that has enabled the individual to receive training and gain experience relevant to the competences set out below.		
GENERIC COMPETENCES		MPETENCES	SPECIFIC COMPETENCES	
	1-SC	CIENTIFIC	Be able to demonstrate the rigorous application of scientific methods in his/her experience to date	
Sci1	understanding the science that underpins the specialty (modality) and the broader aspects of medicine and clinical practice		 Demonstrate the ability to understand the principles of the techniques and methods employed Demonstrate the ability to understand the treatment options and processes available to the patient Demonstrate the ability of a critical understanding of the treatment options and processes available to patients Demonstrate the ability to have a basis knowledge of related disciplings in order to gain use their 	
Sci2	 demon base of l appropri and to th and ther available 	strating a strong knowledge ate to the specialty ne investigations apeutic options	 expertise when required or relevant Demonstrate the ability to understand the external effects and safety with respect to gamete and embryo viability Demonstrate the ability to stay up to date on recent developments and the importance of this to clinical practice Demonstrate participation in education learning events such as journal clubs, local or national scientific 	
Sci3	 experies knowled of inform integrati knowled 	ence of searching for ge, critical appraisal nation and on into the ge base	 Demonstrate participation in education learning events such as journal clubs, local or national scientific meetings Demonstrate the ability to understand the principles, methodologies and limitations of fertility investigations Demonstrate a basic knowledge of related disciplines in order to be able to integrate relevant diagnosti results into an interpretation Demonstrate an awareness of sources of relevant literature Demonstrate an ability to change practice after taking into account new developments and needs in the discipline Demonstrate an understanding of the basis of external factors which have the potential to affect laboratory performance Demonstrate a nuderstanding of male and female reproductive physiology Demonstrate an understanding of how the design of scientific studies can give different grades of scientific evidence Demonstrate how other disciplines can contribute to assisted reproductive technology for both 	
Sci4	 ability to proble the routi developr 	to apply knowledge ems associated with ine provision, and ment, of the service		
Sci5	 ability clinical d test/inte 	to identify the lecision which the rvention will inform		
Sci6	 ability on the e procedure 	to make judgements ffectiveness of res	 diagnoses and treatment, e.g. Genetics & Counselling Demonstrate the knowledge of a range of diagnostic hormone assays, andrology and embryological assessments; the scientific basis of the test, how these are interpreted and what treatments may be offered 	

SPECIALTY :

 Demonstrate a critical understanding of the treatment options and processes available to the infertile couple igations 	
ical understanding of the scientific and clinical methods employed in the practice of clinical embryology ical understanding of the application of investigative protocols and diagnostic tests to assess the fertility potential of a couple, including n analysis, function tests and hormonal assessments ical understanding of interpretation and integration of investigative tests with clinical assessment of the infertile couple ical understanding of the scientific methods and the tools required to evaluate, develop and/or modify both current and emerging nologies as diagnostic and therapeutic tools in clinical embryology loped research skills and expertise sufficient to support supervised and collaborative research initiatives in clinical embryology and nductive medicine	
 participation in appropriate ACE training programmes (eg ACE Certificate in Clinical Embryology) or additional courses eg appropriate MS course, PhD participation in local research meetings and evidence of supervised and collaborative research initiatives, potentially leading to publication o PhD the presentation of outcomes of method evaluations, protocol development and clinical research initiatives eg at scientific meetings the locally nominated and ACE Training Committee approved supervisor national assessor and examiner network for clinical embryology 	
vest vest i criti i criti echr leve cours partic partic PhD he p he lo natio satisf	

SPECIALTY :

Clinical Embryology

EXPERIENCE:		The candidate should be able to demonstrate that he/she has worked in an environment that has enable individual to receive training and gain experience relevant to the competences set out below.		
GENERIC COMPETENCES		OMPETENCES	SPECIFIC COMPETENCES	
	2-CLINICAL		Be able to demonstrate the following relevant to the contribution of his/her specialty to patient care:	
Clin1	• to understand the requirements of accuracy and precision of a procedure in the context of diagnosis, prognosis, monitoring and treatment and to use that information appropriately		 Demonstrate the ability to identify the needs of patients and the ability to provide the most appropriate individualised care Demonstrate the ability to provide advice to clinical colleagues and patients on the interpretation of diagnostic tests and implications for treatment Demonstrate the ability to be able to advise on a choice of treatments or referral to clinical colleagues or GPs where relevant 	
Clin2	 ability to of data and (therapeut any furthe the individe for the call 	o provide interpretation nd a diagnostic tic) opinion, including er action to be taken by dual directly responsible re of the patient	 Demonstrate the ability to give opinion on variation of treatment options according to clinical history and embryological observations during treatment cycle Demonstrate the ability to understand and act on the results of investigations or treatment which necessitates the referral for specialist advice Demonstrate the ability to change a patient pathway in light of investigations Demonstrate the ability to identify the individualised investigations required for a patients course of 	
Clin3	 understa clinical sit patients p specialty 	anding of the wider uation relevant to the presenting to his/her	 Demonstrate the ability to identify the individualised investigations required for a patients course of treatment Demonstrate the ability to undertake and record a thorough, sensitive and detailed assessment, using appropriate techniques and equipment 	
Clin4	 ability to investigat account th picture 	o develop/devise an ion strategy taking into ne complete clinical	 Demonstrate an understanding of patient investigations, embryological methods and principles that underpin the provision of treatment Demonstrate an ability to analyse and interpret investigation reports Demonstrate an understanding of the indicators of laboratory performance Demonstrate the ability to provide advice to clinical colleagues and couples themselves on the interpretation of diagnostic tests and implications for treatment Demonstrate the ability to adapt practice to take into account the needs of different patient groups for example physical or cultural factors Demonstrate the ability to advise on a choice of treatments or referral to clinical colleagues or GP where relevant 	
Clin5	 understa applicatio and the co decisions actions/	anding of the clinical ns of his/her specialty onsequences of made upon his/her dvice		
Clin6	 awarene that unde procedure service 	ess of the evidence base rpins the use of the es employed by the	 Demonstrate an ability to recognise critical incidents and develop rapid response strategies Demonstrate the ability to make a reasoned decision to change the treatment course Demonstrate participation in QA schemes both nationally and in-house Demonstrate an appreciation of the importance of continued audit to evaluate treatment efficacy Demonstrate an understanding of the clinical application of various drug regimes Demonstrate the ability to gain full knowledge of all factors which may contribute to sub-fertility 	

Page 4 of 16

SPECIALTY :

Clinical Embryology

	• a critical understanding of practical and theoretical processes underpinning treatment options available to infertile couple	
Achievement of	• a critical understanding of how a treatment plan is devised taking into account diagnostic tests and relevant history	
Achievennent of.	a complete knowledge of the prevailing statutory framework and professional guidelines regulating ART as they apply to clinical embryology	
	• a level of knowledge and practical skills sufficient to manage correctly a patient's treatment within the clinical embryology laboratory	
	• participation in appropriate ACE training programmes (eg ACE Certificate of Clinical Embryology) or additional courses eg appropriate MSc	
Achieved through	course, PhD	
Achieved through:	 participation in local clinical meetings and clinical case reviews 	
	participation in clinical audit	
	the locally nominated and ACE Training Committee approved supervisor	
Assessed by:	• national assessor and examiner network for clinical embryology	
-	• satisfactory performance in ACE CPD scheme	

Page 5 of 16

SPECIALTY :

EXPERIENCE:		The candidate should be able to demonstrate individual to receive training and gain experie	that he/she has worked in an environment that has enabled the nce relevant to the competences set out below	
	GE		SPECIFIC COMPETENCES	
		3-TECHNICAL	Be able to demonstrate the following, relevant to the modality or area of specialisation in which he/she wishes to be recognised	
Tech1	 under of tech appropropropropropropropropropropropropro	erstanding of the principles associated with a range nniques employed in the modality including the priate use of Information Technology	 Demonstrate the ability to an appropriate level of experience in each of the embryology skills Demonstrate the ability to ensure patients are correctly positioned for 	
Tech2	 knowledge of the standards of practice expected from these techniques including positioning of patients for safe interventions 		 any interventions if appropriate Demonstrate the ability to perform and reach a level of experience in each of the embryology techniques 	
Tech3	experience of performing these techniques		 Demonstrate an understanding of the importance of standard operating procedures Demonstrate an ability to work to standard operating procedures Demonstrate an understanding of the importance of working with 	
Tech4	• the a the ro (troub	ability to solve problems that might arise during utine application of these techniques leshooting)	 accuracy and precision Demonstrate an understanding of the indicators of laboratory performance Demonstrate an ability to recognise deterioration in laboratory performance Demonstrate an ability together information including qualitative and 	
Tech5	• unde quality	erstanding of the principles of quality control and y assurance	 quantitative data that helps to evaluate the patients experience through treatment Demonstrate an ability to participate in a QA scheme to monitor and evaluate the service as part of a quality improvement scheme Demonstrate a familiarity with the evidence for, and limitations of, the common procedures relevant to the discipline used in the diagnosis and treatments of patients 	
Tech6	 expension assuration 	erience of the use of quality control and quality ance techniques including restorative action when mance deteriorates	 Demonstrate an understanding of the principles of the techniques and methods employed in the discipline Demonstrate the knowledge of limitations and expected outcomes for each technique 	

SPECIALTY :

Achievement of:	 an understanding of the practical processes underpinning treatment options available to the infertile couple a level of knowledge and practical skills sufficient to manage correctly a patient's treatment from within the clinical embryology laboratory
Achieved through:	 participation in appropriate ACE training programmes (eg ACE Certificate of Clinical Embryology), incorporating a fully supervised programme of acquiring core practical skills and recorded in a validated log book a logbook recording attainment of technical skills as required by prevailing HFEA standards
Assessed by:	 the locally nominated and ACE Training Committee approved supervisor national assessor and examiner network for clinical embryology

SPECIALTY :

EXPERIENCE: The candidate should be able to individual to receive training and		The candidate should be able to individual to receive training and	demonstrate that he/she has worked in an environment that has enabled the gain experience relevant to the competences set out below.		
GENERIC COMPETENCES			SPECIFIC COMPETENCES		
	4	-RESEARCH AND	Be able to demonstrate a training in research which should include:		
]	DEVELOPMENT			
R&D1	 ability to literature 	o read and critically appraise the	Demonstrate the ability to understand how to interpret critically and appraise scientific reports and articles		
R&D2	 ability to associated 	b develop the aims and objectives d with a project	Demonstrate the ability to use the knowledge gained from research evaluation for service development		
R&D3	 ability to to meet th provides r bias) 	o develop an experimental protocol he aims and objectives in a way that reliable and robust data (i.e. free of	 Demonstrate an understanding of how to interpret critically and appraise scientific reports and articles Demonstrate a familiarity with basic research methods, as applicable to clinical embryology Demonstrate a familiarity with the principles of research and clinical trials 		
R&D4	 ability to work abili results (ir 	o perform the required experimental ity to produce and present the ncluding statistical analysis)	 Demonstrate a rannianty with the principles of research and clinical thats Demonstrate an ability to incorporate research and development methods into the development of new techniques Demonstrate an awareness of sources of relevant literature Demonstrate the ability to carry out basic research methods, as applicable to clinical transmission of the second second		
R&D5	 recognise ability to a of existing developed questions 	se the value of research and has the critically appraise results in the light g knowledge and the hypothesis d and to formulate further research	 embryology Demonstrate the ability to critically and appraise scientific reports and articles Demonstrate the ability to develop an experimental protocol to meet defined aims and objectives Demonstrate a knowledge of statistical analysis Demonstrate an ability to interpret results from a defined hypothesis Demonstrate an ability to formulate further research questions Demonstrate the value of case conferences and other methods of review. 		
R&D6	 ability to appraisal spoken ar 	o present data and provide a critical to an audience of peers – both nd written	 Demonstrate the value of case conterences and other methods of review Demonstrate the need to recognise the need to be aware of emerging technologies and new developments Demonstrate an understanding of statistical analysis and how this influences the results and conclusions of studies 		

SPECIALTY :

Achievement of:	 a critical understanding of research methods and skills up to date knowledge base by continuing appraisal of the literature 	
Achieved through:	 involvement in IVF units research programme a structured taught element (eg ACE Diploma in Clinical Embryology) incorporating a research project or additional courses eg approved MSc course, PhD 	
	• a journal based learning scheme (eg component of ACE CPD)/journal clubs/attendance at scientific meetings	
Assessed by:	 scientific presentation/publication record other documentary evidence of research activity/awareness eg CPD participation or a supporting statement from a supervisor/line manager 	

SPECIALTY :

EXPER	ENCE :	The candidate should individual to receive	d be able to demonstrate that he/she has worked in an environment that has enabled the training and gain experience relevant to the competences set out below.	
GENERIC COMPETENCES		OMPETENCES	SPECIFIC COMPETENCES	
	5-COMMUNICATION		Be able to communicate in both the written and spoken media to colleagues, peers and patients:	
Com1	 ability to assess a situation and act accordingly when representing the specialty ability to respond to enquiries regarding the service provided when dealing with clinical colleagues 		 Demonstrate the ability to present or publish scientific material Understand and demonstrate the ability to communicate clearly, effectively and promptly with other clinical embryologists within the team Demonstrate the ability to discuss treatment options and communicate proposed changes to both patients and colleagues Demonstrate the ability to liaise effectively with clinical, nursing and other colleagues Demonstrate the ability to discuss treatment options and communicate proposed changes to the patients and colleagues Demonstrate the ability to discuss treatment options and communicate proposed changes to the patients in light of laboratory observations 	
Com2				
Com3	 ability to patients, or the public profession 	o communicate with carers and relatives, and other healthcare nals as appropriate	 Demonstrate the ability to communicate sensitively and empathetically with patients Demonstrate the ability to communicate sensitively and empathetically with no discrimination Demonstrate the ability to present or publish scientific material If English is not the first language demonstrate the ability to communicate in English to the standard equivalent to level 7 of the International English Language Testing System, with no element below 6.5 	
Com4	ability to outcome of research a activities	o communicate the of problem solving and and development	 Demonstrate the ability to show how communication can be altered to ensure effective provision of information Demonstrate the knowledge of different forms of patient information, both written, verbal and visual and their appropriate use Demonstrate how patient information can be presented to sensitively address for example different cultures, ages, ethnicity, religious holiefs and social economic status. 	
Com5	 evidence scientific and in the 	e of presentation of material at meetings e literature	 Demonstrate the ability to provide patients with the relevant information to enable patient choice and informed decision making Demonstrate the ability to understand the need to use an appropriate interpreter to assist patients whose first language is not English, wherever possible Demonstrate the ability to participate effectively in clinic review meetings and case discussions Demonstrate the ability to communicate scientific information in an easily understandable format for patients and colleagues Demonstrate an understanding of only using accepted terminology in patient records 	

SPECIALTY :

Achievement of:	 an ability to communicate the treatment plan to clinical colleagues and couples in treatment impart clinical embryological knowledge to peers and patients and explain its relevance demonstrable communication skills
Achieved through:	 a structured taught element (eg ACE Diploma in Clinical Embryology) detailing the importance of development of communication skills additional relevant courses experientially-acquired skills
Assessed by:	 the locally nominated and ACE Training Committee approved supervisor national assessor and examiner network for clinical embryology

SPECIALTY :

EXPERIENCE:		The candidate should be able to demonstrate that individual to receive training and gain experience	t he/she has worked in an environment that has enabled the relevant to the competences set out below.	
GENERIC COMPETENCES			SPECIFIC COMPETENCES	
		6-PROBLEM SOLVING	Be able to deal with the unexpected and thus be able:	
PS1	• to as	sess a situation	 Demonstrate the ability to identify and evaluate problems and take 	
PS2	• deter	rmine the nature and severity of the problem	the appropriate course of action	
PS3	 call upon the required knowledge and experience to deal with the problem 		Demonstrate the ability to plan corrective action when a problem is identified	
PS4	• initia	te resolution of the problem	Demonstrate an ability to systematically identify problems and take corrective and preventative action	
PS5	demonstrate personal initiative			
Achievement of:		 understanding and ability to perform regular performance audit deal with unexpected situations in appropriate and effective manner 		
Achieved through:		 a structured taught element (eg ACE Diploma in Clinical Embryology) detailing the importance of audit and troubleshooting ski practical knowledge and skills gained through experience 		
Assessed by:		 the locally nominated and ACE Training Committee approved supervisor national assessor and examiner network for clinical embryology satisfactory performance in ACE CPD scheme 		

SPECIALTY :

EXPER	RIENCE	ENCE: The candidate should be able to demonstrate that he/she has worked in an environment that has enabled the individual to receive training and gain experience relevant to the competences set out below.		
GENERIC COMPETENCES		COMPETENCES	SPECIFIC COMPETENCES	
	7-PR ACC	ROFESSIONAL OUNTABILITY	Be able to demonstrate an understanding of management principles and techniques, including the following:	
Prof1	 Has read, Standards Scientists a Professions 	, understands and follows the of Proficiency for Clinical and published by the Health s Council	 Ability to demonstrate knowledge of the HPC Code of Conduct Ability to demonstrate participation in an appropriate CPD scheme (after completion of training) Demonstrate the ability to respect the individuality of patients including their rights, dignity and values with respect to diagnostic and treatment options Demonstrate the ability to communicate sensitively and empathetically with patients Demonstrate awareness of HF and E Act 1990 as amended 2008 and subsequent revisions 	
Prof2	• To be per must be ab	sonally responsible for and le to justify their decisions	 and the regulations surrounding the techniques employed Demonstrate awareness of HFEA Code of Practice and ACE Accreditation Standards and Guidelines for the IVF laboratory plus any other relevant publications from DoH or professional bodies Demonstrate a basic knowledge of health and safety requirements appropriate to the discipline Demonstrate the ability to practice in a non-discriminatory manner accepting all individuals for treatment regardless of any religion, ethnicity and social prior in line with the HEEA Code 	
Prof3	 Understar requiremer ethical asp 	nding of the legal and ethical hts of the modality, and the ects of scientific research.	 of Practice Demonstrate the ability to maintain patient confidentiality in line with the HFEA Code of Practice and Data Protection Act Demonstrate the ability to understand what is meant by informed consent Demonstrate the ability to obtain informed consent Demonstrate the understanding of the consequences of failure to gain patient informed 	
Prof4	 Understart safely and abilities an personal pr seek advice 	nds the need to practice effectively within their d can recognise the limits of ractice and identify when to e.	 consent Demonstrate the ability the work within the Professional Body (ACE/HPC) Code of Conduct Demonstrate the ability to be familiar with the evidence for, and limitations of, the common procedures relevant to the discipline used in the diagnosis and treatments of patients Demonstrate the ability to be able to recognise the limits of his/her knowledge and skills 	

SPECIALTY :

Prof5	 Ability to manage personal workload and prioritize tasks appropriately. 	 Demonstrate the ability to understand the importance of effective communication with colleagues and be able to function as an effective member of a multidisciplinary team Demonstrate the ability to demonstrate personal responsibility when a decision regarding the patient has been made Demonstrate the ability to provide justification of decisions made Demonstrate an understanding of relevant regulation including COSHH, Health and Safety and risk assessment and its application within the laboratory
Prof6	• Can demonstrate competence in the principles of clinical governance including clinical audit, accreditation requirements relevant to the modality. This will include the importance of equality and diversity, confidentiality, informed consent and data security	 Demonstrate an understanding why professionals should follow the relevant codes of conduct maintain high standards and maintain patient safety Demonstrate the ability recognise when the professional health could compromise patient car Demonstrate the ability to work as an independent practitioner Demonstrate the ability to understand the principles of clinical governance and be able to audit, reflect on and review practice Demonstrate the ability to understand and appreciate the knowledge and skills of the other professionals with the MDT Demonstrate the ability to work within the multi-disciplinary team
Prof7	 Ability to contribute effectively to work undertaken as part of a multidisciplinary team Ability to supervise others as appropriate to area of practice. Understanding of the role of appraisal in staff management and development. Demonstrate the ability to maintain a professional manner at all times with clinic and other colleagues Demonstrate the ability to encourage participation from colleagues across the MI Demonstrate the ability to refer to clinical colleagues or other diagnostic laborator relevant Demonstrate the ability to have a basic knowledge of health and safety requirem appropriate to the discipline Demonstrate an ability to keep accurate, legible records Demonstrate a knowledge of the appropriate legislation with respect to record keep accurate and the use of appropriate outcome measures Demonstrate a knowledge of the role of audit and review in quality management quality control, quality assurance and the use of appropriate outcome measures Demonstrate a nunderstanding of the value of reflection on practice and the need the outcome of such reflection Demonstrate participation in unit case discussion meetings 	 Demonstrate the ability to maintain a professional manner at all times with clinical, nursing and other colleagues Demonstrate the ability to encourage participation from colleagues across the MDT Demonstrate the ability to refer to clinical colleagues or other diagnostic laboratories where relevant Demonstrate the ability to have a basic knowledge of health and safety requirements appropriate to the discipline Demonstrate an ability to keep accurate, legible records
Prof8		 Demonstrate a knowledge of the appropriate legislation with respect to record keeping Demonstrate an understanding of a quality management system Demonstrate a knowledge of the role of audit and review in quality management, including quality control, quality assurance and the use of appropriate outcome measures Demonstrate a knowledge of how to maintain an effective audit trail and work towards continual improvement Demonstrate an understanding of the value of reflection on practice and the need to record the outcome of such reflection Demonstrate participation in unit case discussion meetings

SPECIALTY :

Prof9	• Understanding of the need and obligation for career-long self-directed learning and the importance of continuing professional development.	 Demonstrate an understanding of the importance of participating in accreditation systems related clinical embryology Demonstrate an understanding of the importance of following a professional code of conduct Demonstrate the basic requirements of the Health and Safety at Work Act 1974 and be able to work within the boundaries of this legislation Demonstrate the awareness of the role of the Health and Safety Executive and the publications available Demonstrate an appreciation of health and safety requirements appropriate to the discipline including safe handling of liquid nitrogen, pressurised cylinders, incident reporting and risk assessments Demonstrate an awareness of HF and E Act 1990 as amended 2008 and subsequent revisions and the regulations surrounding the techniques employed Demonstrate an awareness of HFEA Code of Practice requirements and work within these guidelines to ensure safe practice 				
Prof10	• Understanding of the need for, and ability to establish and maintain, a safe practice environment. Understanding of the requirements and obligations of Health and Safety including infection control					
Prof11	• Understanding of the structure and organization of the department and how it fits into the local clinical setting, General understanding of the way the modality is structured and practised in other locations within the UK. Basic understanding of the importance of financial accountability, budgetary control and resource management.	 Demonstrate an awareness of the ACE Accreditation Standards and Guidelines for the IVF laboratory plus any other relevant publications from DoH or professional bodies Demonstrate the knowledge of the work place specific Health and Safety Policy and abide by the requirements Demonstrate an understanding of relevant regulation including COSHH and the use of Personal Protective Equipment (PPE) Demonstrate the knowledge and correct usage of PPE required for each task within the laboratory e.g. handling liquid nitrogen Appreciate the importance of infection control and demonstrate the ability to follow the Infection Control Policies such as aseptic technique and effective hand washing Practically demonstrate working within the documented requirements for the safe handling of biological specimens, disposal of clinical waste and safety requirements for equipment used Demonstrate an awareness of immunisation requirements and the role of occupational health Practically demonstrate the corrective action for dealing with spillages safely and effectively in line with workplace SOP 				
 <i>Achievement of:</i> an understanding of the management principles and tools used in the service the ability to act as a professional and work effectively as part of a team understanding of the importance and principles of accreditation, audit, confidentiality, data security and safe working practice 						

SPECIALTY :

	٠	a structured taught element (eg approved MSc course or approved lecture programme), participation in appropriate training programmes and
		local courses on general, personnel and financial management, health and safety, audit, etc
Achieved through	٠	participation in local seminars and meetings, attendance at clinical audit meetings and clinical governance committees.
Achieveu thiough:	•	attendance at departmental management meetings
	•	involvement, under supervision, in management within the laboratory
	•	mentoring by an experienced practitioner
Assessed by:	•	the nominated local supervisor and appropriate professional body external advisor/tutors