

Study buddy for ESHRE Nurse & Midwife certification: The link between the curriculum and the literature list

Curriculum		Literature list
A. Physiology of spontaneous conception	A.1. In vivo sperm and egg transport A.2. In vivo oocyte maturation A.3. In vivo Fertilization A.4. In vivo implantation	Clinical gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 7: Sperm and Egg transport, Fertilization and implantation (<i>Only the following sections: 'Sperm transport', 'Egg transport'; p243-252 and the summaries on p253, p258-259, p268</i>) Chapter 6: Regulation of the Menstrual Cycle (Complete chapter) In Vitro Fertilization <ul style="list-style-type: none"> Chapter 6: Implantation and early stages of fetal development (Complete chapter)
B. Epidemiology of infertility	B.1. Causes	Boivin et al., 2007
	B.2. Prevalence	Clinical gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 27: Female Infertility (<i>The following section can be skipped: 'Epidemiology of infertility in the US'; p1138-1139</i>)
	B.3. Definitions	<ul style="list-style-type: none"> Chapter 30: Male Infertility (Complete chapter)
	B.4. Fertility (treatment-) prognosis	ESHRE ART fact sheet ICMART glossary 2009 Schmidt et al., 2012 Calhaz-Jorge et al., 2016
C. Female reproduction	C.1. Development of the female reproductive tract	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 3: The ovary- Embryology and development (Complete chapter)
	C.2. Anatomy of the female reproductive system C.3. Physiology of the female reproductive system	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 4: the uterus (<i>The following sections can be skipped: 'A Teleological Theory of Endometrial Menstrual Events'; 'The uterus is an endocrine organ'; 'Reproductive function of Leiomyomas'; 'Medical treatment of Leiomyomas'; p135-143 and p150-155</i>)
	C.3.1. Endocrinology and the menstrual cycle	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 3: The ovary- Embryology and development (Complete chapter) Chapter 4: the uterus sides (<i>The following sections can be skipped: 'A Teleological Theory of Endometrial Menstrual Events'; 'The uterus is an endocrine organ'; 'Reproductive function of Leiomyomas'; 'Medical treatment of Leiomyomas'; p135-143 and p150-155</i>) Chapter 6: Regulation of the Menstrual Cycle (Complete chapter)
	C.3.2. Function of the organs	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 3: The ovary- Embryology and development (Complete chapter) Chapter 4: the uterus sides (<i>The following sections can be skipped: 'A Teleological Theory of Endometrial Menstrual Events'; 'The uterus is an endocrine organ'; 'Reproductive function of Leiomyomas'; 'Medical treatment of Leiomyomas'; p135-143 and p150-155</i>)
	C.3.3. Oogenesis C.3.4. The oocyte	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 3: The ovary- Embryology and development (Complete chapter)
	C.4. Diagnosis of the female reproductive system	Clinical Gynecology endocrinology and infertility

C.4.1. Medical History Taking	<ul style="list-style-type: none"> Chapter 27: Female Infertility (<i>The following section can be skipped: 'Epidemiology of infertility in the US'; p1138-1139</i>)
C.4.2. Physical and gynecological examination	
C.4.3. Endocrine analysis	<p>Clinical Gynecology endocrinology and infertility</p> <ul style="list-style-type: none"> Chapter 20: Reproduction and the Thyroid (<i>The following sections can be skipped: 'Functional changes with aging', 'Thyroid function tests', 'Osteoporosis and excessive thyroxine', 'Thyroid nodules and from Thyroid physiology in the fetus and the neonate'; p887-889, p895-898</i>) <p>In Vitro Fertilization</p> <ul style="list-style-type: none"> Chapter 2: Endocrine Control of Reproduction (Complete chapter)
C.4.4. Gynecological ultrasound	<p>Practical Gynecological Ultrasound</p> <ul style="list-style-type: none"> Chapter 2: Practical equipment operation and technique (Complete chapter)
C.4.5. Imaging of uterine cavity and tubal patency (i.e. HSG, saline, gel, oil or foam HyCoSy)	<p>Clinical Gynecology endocrinology and infertility</p> <ul style="list-style-type: none"> Chapter 27: Female Infertility (<i>The following section can be skipped: 'Epidemiology of infertility in the US'; p1138-1139</i>)
C.4.6. Hysteroscopy	
C.4.7. Laparoscopy/ endoscopy	
C.4.8. Endometrial Biopsy	
C.5 Ultrasound scans	<p>Practical Gynecological Ultrasound</p> <ul style="list-style-type: none"> Chapter 7 Ultrasounds and fertility (Complete chapter)
C.6. Diagnosing and treating pathology of the female reproductive system	<p>Clinical Gynecology endocrinology and infertility</p> <ul style="list-style-type: none"> Chapter 27: Female Infertility (<i>The following section can be skipped: 'Epidemiology of infertility in the US'; p1138-1139</i>)
C.6.1. Polycystic Ovary Syndrome	ESHRE Guideline on PCOS (Summary of recommendations in Human Reproduction only)
C.6.2. Endometriosis	ESHRE endometriosis guideline (Only Human Reproduction publication)
C.6.3. Premature Ovarian Insufficiency	ESHRE POI guideline (Only summary document)
C.6.4. Tubal pathology	<p>Clinical Gynecology endocrinology and infertility</p> <ul style="list-style-type: none"> Chapter 27: Female Infertility (<i>The following section can be skipped: 'Epidemiology of infertility in the US'; p1138-1139</i>)
C.6.5. Uterine malformations	<p>Clinical Gynecology endocrinology and infertility</p> <ul style="list-style-type: none"> Chapter 4: the uterus sides (<i>The following sections can be skipped: 'A Teleological Theory of Endometrial Menstrual Events'; 'The uterus is an endocrine organ'; 'Reproductive function of Leiomyomas'; 'Medical treatment of Leiomyomas'; p135-143 and p150-155</i>)
C.6.6. Other	
C.7. General pathology interfering with female fertility(treatment)	<p>Clinical Gynecology endocrinology and infertility</p> <ul style="list-style-type: none"> Chapter 4: the uterus (<i>The following sections can be skipped: 'A Teleological Theory of Endometrial Menstrual Events'; 'The uterus is an endocrine organ'; 'Reproductive function of Leiomyomas'; 'Medical treatment of Leiomyomas'; p135-143 and p150-155</i>) Chapter 27: Female Infertility (<i>The following section can be skipped: 'Epidemiology of infertility in the US'; p1138-1139</i>)

D. Male reproduction	D.1. Development of the male reproductive tract	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 3: The ovary- Embryology and development (Complete chapter)
	D.2. Anatomy of the male reproductive system	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 30: Male Infertility (Complete chapter) In Vitro Fertilization
	D.3. Physiology of the male reproductive system	<ul style="list-style-type: none"> Chapter 3: Gametes and gametogenesis (Complete chapter)
	D.3.1. Endocrinology	In Vitro Fertilization. <ul style="list-style-type: none"> Chapter 2: Endocrine Control of Reproduction (Complete chapter)
	D.3.2. Function of the organs	In Vitro Fertilization <ul style="list-style-type: none"> Chapter 3: Gametes and gametogenesis (Complete chapter)
	D.3.3. Spermatogenesis	In Vitro Fertilization. <ul style="list-style-type: none"> Chapter 3: Gametes and gametogenesis (Complete chapter) Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 30: Male Infertility (Complete chapter)
	D.3.4. The spermatozoa	In Vitro Fertilization <ul style="list-style-type: none"> Chapter 4: Sperm and oocyte interaction (Complete chapter)
	D.4. Diagnosis of the male reproductive system D.4.1. Medical History Taking D.4.2. Physical examination D.4.3. Assessments of the sperm sample based on WHO guidelines D.4.4. Endocrine analysis D.4.5. Ultrasound of the testis and/or prostate D.5. Pathology of the male reproductive system D.5.1. Obstructive azoospermia D.5.2. Non-obstructive azoospermia D.5.3. Varicocoele D.5.4. Other D.6. General pathology interfering with male fertility(treatment)	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 30: Male Infertility (Complete chapter)
E. Clinical fertility treatments	E.1. Surgical treatment	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 27: Female Infertility (<i>The following section can be skipped: 'Epidemiology of infertility in the US'; p1138-1139</i>) ESHRE endometriosis guideline (Only Human Reproduction publication)
	E.2. Ovulation induction	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 27: Female Infertility (<i>The following section can be skipped: 'Epidemiology of infertility in the US'; p1138-1139</i>)
	E.3. Intra-Uterine Insemination (IUI)	
	E.3.1. Controlled Ovarian Stimulation E.3.1.1. Types of medication E.3.1.2. Stimulation regimes E.3.2. Insemination	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter)

E.4. In Vitro Fertilisation and Intra-Cytoplasmic Sperm Injection (IVF/ICSI)	<p>Clinical Gynecology endocrinology and infertility</p> <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter) <p>In Vitro Fertilization</p> <ul style="list-style-type: none"> Chapter 11: Oocyte retrieval and embryo culture (Complete chapter) Chapter 13: Micromanipulation techniques (Only the following sections: 'Introduction'; 'ICSI: genetic implications', 'surgical sperm retrieval', 'indications for ICSI'; 'IMSI'; 'Assisted Hatching'; p216-219, p226-228)
E.4.1. Controlled Ovarian Stimulation E.4.1.1. Types of medication E.4.1.2. Stimulation regimes	<p>Clinical Gynecology endocrinology and infertility</p> <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter)
E.4.2. Oocyte retrieval	<p>Clinical Gynecology endocrinology and infertility</p> <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter)
E.4.2.1. Procedure	<p>In Vitro Fertilization</p> <ul style="list-style-type: none"> Chapter 11: Oocyte retrieval and embryo culture (Complete chapter)
E.4.2.2. Pain relief	Kwan et al, 2013 (standard version)
E.4.3. Embryo transfer	<p>Clinical Gynecology endocrinology and infertility</p> <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter)
E.5. Frozen Embryo Transfer (FET) cycles	<p>Clinical Gynecology endocrinology and infertility</p> <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter) <p>In Vitro Fertilization</p> <ul style="list-style-type: none"> Chapter 11: Oocyte retrieval and embryo culture (Complete chapter) Chapter 12: Cryopreservation of gametes and embryo's (<i>The following section can be skipped: 'Principles of cryobiology'; p191-196</i>)
E.5.1. Monitoring and timing of the FET-cycle	<p>In Vitro Fertilization</p> <ul style="list-style-type: none"> Chapter 12: Cryopreservation of gametes and embryo's (<i>The following section can be skipped: 'Principles of cryobiology'; p191-196</i>)
E.5.2. Natural cycles and stimulated cycles	<p>In Vitro Fertilization</p> <ul style="list-style-type: none"> Chapter 12: Cryopreservation of gametes and embryo's (<i>The following section can be skipped: 'Principles of cryobiology'; p191-196</i>) <p>Clinical Gynecology endocrinology and infertility</p> <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter)
E.6. Surgical treatments for sperm retrieval in the male patient	<p>Clinical Gynecology endocrinology and infertility</p> <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter) <p>In Vitro Fertilization</p> <ul style="list-style-type: none"> Chapter 10: Sperm and ART (<i>The following sections can be skipped: 'Sperm preparation for in-vitro fertilization' and for 'Sperm preparation for ICSI/IMSI'; p144-150</i>)

	E.6.1. PESA (Percutaneous Epididymal Sperm Aspiration) E.6.2. MESA (Microsurgical Epididymal Sperm Aspiration) E.6.3. TESE (Testicular Sperm Extraction)	In Vitro Fertilization <ul style="list-style-type: none"> Chapter 10: Sperm and ART (<i>The following sections can be skipped: 'Sperm preparation for in-vitro fertilization' and for 'Sperm preparation for ICSI/IMSI'; p144-150</i>)
	E.7. Third party reproduction E.7.1. Oocyte donation E.7.2. Sperm donation E.7.3 Embryo donation	ESHRE Task Force on Ethics and Law: Gamete and embryo donation
	E.7.4. Surrogacy	Shenfield et al, 2005
	E.8. Fertility preservation	In Vitro Fertilization <ul style="list-style-type: none"> Chapter 12: Cryopreservation of gametes and embryos (<i>The following section can be skipped: 'Principles of cryobiology'; p191-196</i>)
F. Lab Medical Assisted Reproduction (MAR)-procedures	F.1. Sperm preparation for IUI, IVF, ICSI	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter) In Vitro Fertilization <ul style="list-style-type: none"> Chapter 10: Sperm and ART (<i>The following sections can be skipped: 'Sperm preparation for in-vitro fertilization' and for 'Sperm preparation for ICSI/IMSI'; p144-150</i>)
	F.2. Slow freezing and vitrification	In Vitro Fertilization <ul style="list-style-type: none"> Chapter 12: Cryopreservation of gametes and embryo's (<i>The following section can be skipped: 'Principles of cryobiology'; p191-196</i>)
	F.3. ICSI	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter)
	F.4. IVF	Hart & Norman, 2013a-b Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter)
	F.5. Non-routine methods	
	F.5.1. In Vitro Maturation (IVM)	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter)
	F.5.2. Assisted Hatching (AHA)	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter) In Vitro Fertilization Chapter 13: Micromanipulation techniques (Only the following sections: 'Introduction'; 'ICSI: genetic implications', 'surgical sperm retrieval', 'indications for ICSI'; 'IMSI'; 'Assisted Hatching'; p216-219, p226-228)

G. Embryology	G.1. Mitosis and meiosis	In Vitro Fertilization <ul style="list-style-type: none"> Chapter 5: First stages of development (Only the following section: 'Pre-implantation development'; p64-70) Chapter 6: Implantation and early stages of fetal development (Complete chapter)
	G.2. Fertilization and zygotes	In Vitro Fertilization <ul style="list-style-type: none"> Chapter 4: Sperm and oocyte interaction (Complete chapter) Chapter 5: First stages of development (Only the following section: 'Pre-implantation development'; p64-70)
	G.3. Morphology and cleavage of the embryo	IVF book, chapter 5 In Vitro Fertilization <ul style="list-style-type: none"> Chapter 5: First stages of development (Only the following section: 'Pre-implantation development'; p64-70) Chapter 6: Implantation and early stages of fetal development (Complete chapter)
	G.4. Implantation of the embryo	Clinical gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 7: Sperm and Egg transport, Fertilization and implantation (Only the following sections: 'Sperm transport', 'Egg transport'; p243-252 and the summaries on p253, p258-259, p268) In Vitro Fertilization <ul style="list-style-type: none"> Chapter 5: First stages of development (Only the following section: 'Pre-implantation development'; p64-70) Chapter 6: Implantation and early stages of fetal development (Complete chapter)
	G.5. Time-lapse	Kirkegaard et al, 2015
H. Genetics	H.1. Genotype and phenotype	In Vitro Fertilization <ul style="list-style-type: none"> Chapter 4: Sperm and oocyte interaction (Complete chapter)
	H.2. Chromosomal abnormalities: numerical, structural	In Vitro Fertilization <ul style="list-style-type: none"> Chapter 14: Preimplantation genetic diagnosis (Complete chapter)
	H.3. Basic methods: cytogenetics (karyotyping, FISH,..), molecular genetics (PCR, ...)	
	H.4. Preimplantation Genetic Testing for Monogenic/Single gene diseases (PGT-M) and Preimplantation Genetic Testing for Aneuploidies (PGT-A)	In Vitro Fertilization <ul style="list-style-type: none"> Chapter 14 Preimplantation genetic diagnosis (Complete chapter) Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter)
	H.5. Epigenetics/imprinting	In Vitro Fertilization <ul style="list-style-type: none"> Chapter 5: First stages of development (Only the following section: 'Pre-implantation development'; p64-70) Chapter 15: Epigenetics and assisted reproduction (Complete chapter) Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 32: Assisted Reproductive Technologies (Complete chapter)

I. Early pregnancy	I.1. Endocrinology of early pregnancy	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 8: The endocrinology of pregnancy (<i>Only the following sections: 'Progesterone', 'human Chorionic Gonadotrophin'; p270-273 and p287-291</i>)
	I.2. Pregnancy test	In Vitro Fertilization <ul style="list-style-type: none"> Chapter 6: Implantation and early stages of fetal development (Complete chapter)
	I.3. Ultrasound scanning (sacs, heartbeat)	Practical Gynecological Ultrasound <ul style="list-style-type: none"> Chapter 7 Ultrasounds and fertility (Complete chapter)
	I.4. Early pregnancy failures	Clinical Gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 33: Ectopic pregnancy (The following section can be skipped: 'Unusual types'; p1408-1412) ESHRE Guideline: Recurrent Pregnancy loss (summary paper in Human Reproduction Open only)
	I.4.1. Ectopic pregnancies	
	I.4.2. Recurrent early pregnancy loss	
J. Quality of care	J.1. Quality assurance J.1.1. ISO-quality management	Alper, 2013
	J.1.2. Quality indicators (structure, process, outcome)	Dancet et al., 2013
	J.1.3. If/ how/when to implement new procedures	Harper et al., 2012
	J.2. European legislation J.2.1. Infection screening J.2.2. Laboratory conditions	EU tissues and cells directive ESHRE Revised guidelines for good practice in IVF Laboratories (Complete document)
K. Psychosocial wellbeing of and support for patients	K.1. Psychosocial care in fertility clinics: patient preferences and well-being K.2. Psychosocial care of patients before treatment K.3. Psychosocial care of patients during treatment K.4. Psychosocial care of patients after treatment	ESHRE psychology guideline (Only summary document)
	K.5. Human and system factors of patient-centered care	Van Empel et al., 2010 Dancet et al., 2010 Dancet et al., 2011
	K.6. Informed and shared decision making	Sol Olafsdottir et al., 2013 Mulley et al., 2012
L. Lifestyle, age and infertility	L.1. Lifestyle advice	Sharma et al., 2013
	L.2. The effect of age on fertility(treatment)	Schmidt et al., 2012 Clinical gynecology endocrinology and infertility <ul style="list-style-type: none"> Chapter 27: Female Infertility (<i>The following section can be skipped: 'Epidemiology of infertility in the US'; p1138-1139</i>) Chapter 30: Male Infertility (Complete chapter)

M. Research	M.1. Literature research skills	Essentials of Nursing Research <ul style="list-style-type: none"> Chapter 7: Findings and reviewing research: Evidence in the literature (Only the following sections: 'summary points', p130; 'locating relevant literature for a research review', p118-124)
	M.2. Basic principles of quantitative and qualitative research	Essentials of Nursing Research <ul style="list-style-type: none"> Chapter 3: Key concept and steps in qualitative and quantitative research (only the following section: 'summary points', p59-60) Chapter 11: Measurement and data quality: (Only the following sections: 'summary points' pg 212)
	M.3. Informed consent and other procedures for protecting research	Essentials of Nursing Research (Denise Polit & Cheryl Tatano Beck) <ul style="list-style-type: none"> Chapter 5: Ethics in research (Only the following sections: 'summary points', p96; 'informed consent' and 'confidentiality of procedures', p87-89)
	M.4. Collecting quantitative data	Essentials of Nursing Research <ul style="list-style-type: none"> Chapter 10 : Sampling and data collection in quantitative studies (only the following sections; 'summary points', p130;'sample in quantitative studies',p181-182;'self reports', p118-124)
	M.5. Interpreting data	Clinical gynecology endocrinology and infertility <ul style="list-style-type: none"> Appendix I: Interpreting Epidemiologic Reports (Complete appendix) Essentials of Nursing Research <ul style="list-style-type: none"> Chapter 12: Statistical analysis of quantitative data (Only the following section: 'tips on reading text with statistical information', p240-242)
N. Safety of fertility treatment	N.1. Ovarian Hyper Stimulation Syndrome risk	The Management of Ovarian Hyperstimulation Syndrome (Royal College of Obstetricians & Gynaecologists)
	N.2. Risks of multiple pregnancies	Pinborg, 2005
	N.3. Risks for intended mothers	Siristatidis et al., 2013
	N.4. Risks for future children	Hart & Norman, 2013a-b Pinborg et al., 2013 Simpson, 2014