



University of Al-Nahrain
High institute for infertility diagnosis and ART
Department of applied embryology
Master's in applied embryology
First semester

2024-2025

Planned curriculum

الفصل الأول: 2024-2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: General Embryology
الوحدات: 3T+3P=4C.H.
Theory



جامعة النهرين
المعهد العالي لتشخيص العقم
والتقنيات المساعدة على الإنجاب
قسم علم الأجنة التطبيقي

NO	Week starting	Lecture Topic	Lecturer
1	15/9/2024	Introduction and Gametogenesis: Spermatogenesis	Dr.Amal Abdulwahid Mohammed
2	22/9/2024	Gametogenesis, Oogenesis and types of ova	Dr.Amal Abdulwahid Mohammed
3	29/9/2024	First week: Ovulation & fertilization	Dr.Amal Abdulwahid Mohammed
4	6/10/2024	First week: Pre-implantation embryology – level of Cleavage	Dr.Amal Abdulwahid Mohammed
5	13/10/2024	Implantation	Dr.Amal Abdulwahid Mohammed
6	20/10/2024	Second week of development: Development of bilaminar germ disc	Dr. Rana Alsadi
7	27/10/2024	Fate mapping and Morphogenetic movements	Dr. Rana Alsadi
8	3/11/2024	Mid-term Examination	
9	10/11/2024	Introduction to molecular regulation and signaling	Dr.Amal Abdulwahid Mohammed
10	17/11/2024	Third week: Formation Trilaminar germ disc	Dr. Rana Alsadi
11	24/11/2024	Development from third to eight weeks I	Dr. Rana Alsadi
12	1/12/2024	Development from third to eight weeks II	Dr. Rana Alsadi
13	8/12/2024	The gut tube and body cavities	Dr. Rana Alsadi
14	15/12/2024	Third months to birth (the fetus and placenta)	Dr. Ban Thabit
15	22/12/2024	Final exam	

جامعة النهرين

الفصل الأول: 2024-2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: General Embryology
الوحدات: 3P=1C.H.
Practical



المعهد العالي لتشخيص العقم
والتقنيات المساعدة على الإنجاب
قسم علم الأجنة التطبيقي

NO	Week starting	Lecture Topic	Lecturer
1	15/9/2024	Demonstration for the lab and reproductive system in mice	Dr.Amal Abdulwahid Mohammed
2	22/9/2024	Estrus cycle and vaginal smear in mice	Dr. Rehab Almaliki
3	29/9/2024	Cervical mucus assessment and hormonal control of the monthly menstrual cycle	Dr.Amal Abdulwahid Mohammed
4	6/10/2024	Gametogenesis I: Oogenesis	Dr.Amal Abdulwahid Mohammed
5	13/10/2024	Protocol of ovulation induction I	Dr. Rehab Almaliki
6	20/10/2024	Protocol of ovulation induction II	Dr. Rehab Almaliki
7	27/10/2024	Mid-term Examination	
8	3/11/2024	Gametogenesis II: spermatogenesis	Dr.Amal Abdulwahid Mohammed
9	10/11/2024	Seminal fluid analysis I/ macroscopic Examination	Dr.Amal Abdulwahid Mohammed
10	17/11/2024	Seminal fluid analysis II/ microscopic and sperm concentration	Dr.Amal Abdulwahid Mohammed
11	24/11/2024	Seminal fluid analysis/morphology and Kruger strict criteria	Dr.Amal Abdulwahid Mohammed
12	1/12/2024	Seminal fluid analysis/sperm motility	Dr Amal Abdulwahid
13	8/12/2024	Differentiation of leukocytospermia	Dr Rehab Almaliki
14	15/12/2024	Differentiation of leukocytospermia	Dr Rehab Almaliki

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- **ملاحظة** // يتم الاشراف على الدرس العملي من قبل استاذ مادة النظري وبأشراف اعضاء الهيئة التدريسية من حملة شهادة الماجستير في المعهد.

الفصل الأول: 2024-2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: Histology
الوحدات: 3T+3P=4C.H.:
Theory



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قسم علم الأجنة التطبيقي

No	Week starting	Lecture Topic	Lecturer
1	15/9/2024	Cell I	Dr. Rana Alsadi
2	22/9/2024	Cell II	Dr. Rehab Almaliki
3	29/9/2024	Epithelial tissue and glands	Dr. Rana Alsadi
4	6/10/2024	Connective tissue	Dr Ban Thabit
5	13/10/2024	Muscular tissue, cartilage and bone	Dr Ban Thabit
6	20/10/2024	Nervous Tissue	Dr. Rana Alsadi
7	27/10/2024	Endocrine system I	Dr. Rana Alsadi
8	3/11/2024	Mid-term Examination	
9	10/11/2024	Urinary system	Dr. Rana Alsadi
10	17/11/2024	Male Reproductive system	Dr. Rana Alsadi
11	24/11/2024	Female Reproductive system	Dr Ban Thabit
12	1/12/2024	Histological changes of placental and umbilical cord	Dr Ban Thabit
13	8/12/2024	Immune system and lymphoid tissue	Dr. Rehab Almaliki
14	15/12/2024	Apoptosis	Dr. Rehab Almaliki

الفصل الأول: 2024-2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: Histology
الوحدات: 3P=1C.H.
Practical



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والتقنيات المساعدة على الإنجاب
قسم علم الأجنة التطبيقي

No	Week starting	Lecture Topic	Lecturer
1	15/9/2024	Histological preparation	Dr. Rana Alsadi
2	22/9/2024	Epithelial tissue	Dr. Rana Alsadi
3	29/9/2024	Glandular epithelium	Dr. Rana Alsadi
4	6/10/2024	Connective tissue	Dr Ban Thabit
5	13/10/2024	Bone and cartilage	Dr Ban Thabit
6	20/10/2024	Nervous Tissue	Dr. Rana Alsadi
7	27/10/2024	Mid-term Examination	
8	3/11/2024	Muscular Tissue	Dr. Rana Alsadi
9	10/11/2024	Endocrine system (I)	Dr. Rana Alsadi
10	17/11/2027	Endocrine system (II)	Dr. Rana Alsadi
11	24/11/2024	Female Reproductive system	Dr Ban Thabit
12	1/12/2024	Male Reproductive system	Dr. Rana Alsadi
13	8/12/2024	The heart and blood vessels	Dr. Rana Alsadi
14	15/12/2024	Blood and lymphoid systems	Dr Ban Thabit

● **ملاحظة** // يتم الاشراف على الدرس العملي من قبل استاذ مادة النظري وبأشراف اعضاء الهيئة التدريسية من حملة شهادة الماجستير في المعهد.

الفصل الأول: 2024-2025
دراسة الماجستير في علم الأجنة التطبيقي

الموضوع: Reproduction

الوحدات: 2T=2C.H.

Theory



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قسم علم الأجنة التطبيقي

NO	Week starting	Lecture Topic	Lecturer
1	15/9/2024	Physiological anatomy of female Reproductive system	Assst.Prof.Dr. Wasan Adnan
2	22/9/2024	Normal puberty and abnormal gender differentiation in female	Assst.Prof.Dr. Wasan Adnan
3	29/9/2024	Hypothalamic and Pituitary hormonal control of female sexual functions	Lec. Dr. Amal Abdulwahid
4	6/10/2024	Monthly menstrual cycle	Assst.Prof.Dr. Wasan Adnan
5	13/10/2024	The role of Kisspeptin on Hypothalamic and Pituitary hormonal control	Lec. Dr. Amal Abdulwahid
6	20/10/2024	Immunology of female reproductive system I	Dr. Rehab almaliki
7	27/10/2024	Mid-term Examination	
8	3/11/2024	Immunology of female reproductive system II	Dr. Rehab almaliki
9	10/11/2024	Hypothalamic and Pituitary hormonal control of male sexual functions	Assist. Prof. Dr.Hayder Mosa
10	17/11/2024	Normal puberty and abnormal gender differentiation in male	Assist. Prof. Dr.Hayder Mosa
11	24/11/2024	Physiology of semen	DR.Amal Mohammed
12	1/12/2024	The immunology of male reproductive system	Dr. Rehab almaliki
13	8/12/2024	Male sexual acts and psychological effect on sperm production	Prof. Dr.Ula Mohamed
14	15/12/2024	Menopause and Andropause	Assist. Prof. Dr.Hayder Mosa

الفصل الأول: 2024-2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: Medical Statistics
الوحدات: 1T=1C.H.
Theory



جامعة النهرين
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والتقنيات المساعدة على الإنجاب
قسم علم الأجنة التطبيقي

NO	Week starting	Lecture Topic	Lecturer
1	15/9/2024	Introduction in Statistical science – Statistical symbols DATA –Samples- Variables type	Prof. Dr. Nasr Noori Al-Anbari
2	22/9/2024	Measurements of central tendency and dispersion (Mean- Median-Mode- Variance- SD-SE-CV-Range) Computer applications	Prof. Dr. Nasr Noori Al-Anbari
3	29/9/2024	Simple regression and simple correlation: Concepts and types/ Prediction equations / Application of Examples	Prof. Dr. Nasr Noori Al-Anbari
4	6/10/2024	Multiple regression and multiple correlation Computer applications: Third and Fourth weeks	Prof. Dr. Nasr Noori Al-Anbari
5	13/10/2024	Probability's –Binomial –Hypothesis test- $P \leq 0.05$ and $P \leq 0.01$	Prof. Dr. Nasr Noori Al-Anbari
6	20/10/2024	Normal distribution –T test –Z test/ Examples	Prof. Dr. Nasr Noori Al-Anbari
7	27/10/2024	Chi-Square test/ Examples Computer applications: sixth and Seventh weeks	Prof. Dr. Nasr Noori Al-Anbari
8	3/11/2024	Concepts in Design and analysis of experimental (Design- Experiment -Experiment unit –Experimental error -Degree of freedom- Significant level- Analysis of variance- Statistical model	Prof. Dr. Nasr Noori Al-Anbari
9	10/11/2024	Mid exam	Prof. Dr. Nasr Noori Al-Anbari
10	17/11/2024	Tests of Statistical (Least significant difference- LSD, Duncan's multiple range, Tukey / Application of Examples	Prof. Dr. Nasr Noori Al-Anbari
11	24/11/2024	Computer applications: Tenth	Prof. Dr. Nasr Noori Al-Anbari
12	1/12/2024	Concepts of Specify- Sensitivity- Odd ratio - Relative risk in Medical researches and studies/ Application of Examples	Prof. Dr. Nasr Noori Al-Anbari
13	8/12/2024	Matrices – Concepts, Types, Arithmetic operations/ Application of Examples	Prof. Dr. Nasr Noori Al-Anbari
14	15/12/2024	Tests in Medical researches and studies: Parametric and Non-parametric test-Goodness of Fit LC50 and LD50	Prof. Dr. Nasr Noori Al-Anbari

الفصل الأول: 2024-2025
دراسة الماجستير في علم الأجنة التطبيقي
English:الموضوع
1T=1C.H.:الوحدات
Theory



جامعة النهرين
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والتقنيات المساعدة على الإنجاب
قسم علم الأجنة التطبيقي

NO	Week starting	Lecture Topic	Lecturer
1	15/9/2024	Introduction: Overview of English Grammar	Dr. Sahar Naeem
2	22/9/2024	Unit 1: International student Reading: Going abroad to study Following instructions: filling in forms	Dr. Sahar Naeem
3	29/9/2024	Reading methods: skim; scan; intensive reading; extensive reading Writing: Checking your writing error correction Writing an informal email	Dr. Sahar Naeem
4	6/10/2024	Vocabulary development: Reading a paragraph and re-write it using the student's own words	Dr. Sahar Naeem
5	13/10/2024	Listening Comprehension Exercises	Dr. Sahar Naeem
6	20/10/2024	Unit 2: where in the world Reading: Three countries Skimming and scanning: reading the general idea, and for particular information Writing: My country Brainstorming ideas Linking ideas	Dr. Sahar Naeem
7	27/10/2024	First Exam	
8	3/11/2024	Unit 3: Newspaper articles: Reading: an unexpected journey Writing: mistaken identity Vocabulary development: word building	Dr. Sahar Naeem
9	10/11/2024	Unit 4: Modern technology Reading: Innovation Identifying the main message: using topic sentence to identify paragraph content Writing: Technology - good or bad? Varying vocabulary	Dr. Sahar Naeem
10	17/11/2024	Unit 5: Conference and visits Writing academic emails and letters Word building	Dr. Sahar Naeem
11	24/11/2024	Listening Comprehension Exercises	Dr. Sahar Naeem
12	1/12/2024	Unit 6: Science and our world Making notes: organizing, recording, and remembering important information Paraphrasing and summarizing Associated words	Dr. Sahar Naeem
13	8/12/2024	Second Exam	
14	15/12/2024	Unit 7: Three famous writers Using original sources: Information on the Net Using the Internet: Developing a search plan	Dr. Sahar Naeem



University of Al-Nahrain
High institute for infertility diagnosis and ART
Department of applied embryology
Master's in applied embryology
Second semester

2024-2025

Planned curriculum

Courses

- 1- Assisted reproductive technologies
- 2- Special embryology
- 3- Experimental embryology
- 4- Biochemistry
- 5- Teratology
- 6- English
- 7- Seminar

الفصل الثاني 2024 – 2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: Clinical Biochemistry
(Theory)
الوحدات: 1T+2P=2C.H.



جامعة النهرين
المعهد العالي لتشخيص العقم
والتقنيات المساعدة على الإنجاب
قسم علم الأجنة التطبيقي

No	Date	Lecture Topic	Lecturer
1	9/2/2025	Metabolism of Carbohydrate	Prof. Dr. Estabraq
2	16/2/2025	Metabolism of lipid	Assist prof. Dr Muayd
3	23/2/2025	Metabolism of protein	Prof. Dr. Estabraq
4	2/3/2025	General characteristic of hormone system Mode of action Hormone receptor	Prof. Dr. Estabraq
5	9/3/2025	Biochemistry of steroidal hormones	Prof. Dr. Estabraq
6	16/3/2025	Biochemistry of non-steroidal hormones	Prof. Dr. Estabraq
7	23/3/2025	Mid-term Examination	
8	30/3/2025	Basic structure components of nucleic acid, general features of DNA double helix and RNA, viral nucleic acids and their replication	Prof. Dr. Estabraq
9	6/4/2025	Nucleic acid replication, transcription and protein synthesis	Prof. Dr. Estabraq
10	13/4/2025	Biochemistry of Infertility (PCOS)	Prof. Dr. Estabraq
11	20/4/2025	General concepts of polymerase chain reaction (PCR) and its biomedical application	Prof. Dr. Estabraq
12	27/4/2025	Drug receptors interaction	Assist prof.Dr Muayd
13	4/5/2025	Liver function test	Prof. Dr. Estabraq
14	11/5/2025	Reactive Oxygen Species	Assist prof.Dr Muayd

الفصل الثاني 2024 - 2025
دراسة الماجستير في علم الأجنة التطبيقي
Clinical Biochemistry: الموضوع
(Practical)
الوحدات 2T=2C.H.



جامعة النهرين
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والتقنيات المساعدة على الإنجاب
قسم علم الأجنة

No	Date	Lecture Topic	Lecturer
1	9/2/2025	Lab set-up	Assist prof.Dr Muayd
2	16/2/2025	Spectrophotometer system & Glucose estimation in blood	Assist prof.Dr Muayd
3	23/2/2025	Biochemistry of culture media and culture conditions	Assist prof.Dr Muayd
4	2/3/2025	Biochemistry of semen / Cholesterol estimation in semen II	Assist prof.Dr Muayd
5	9/3/2025	Principle and application of RIA & ELISA	Assist prof.Dr Muayd
6	16/3/2025	Hormonal assay/ Steroid Hormone	Assist prof.Dr Muayd
7	23/3/2025	Mid-term Examination	
8	30/3/2025	Hormonal assay/ Non-steroid hormone	Assist prof.Dr Muayd
9	6/4/2025	Embryo metabolism	Assist prof.Dr Muayd
10	13/4/2025	DNA extraction	Assist prof.Dr Muayd
11	20/4/2025	PCR	Assist prof.Dr Muayd
12	27/4/2025	Urea and creatinine estimation	Assist prof.Dr Muayd
13	4/5/2025	Enzyme assay (GOT and GPT)	Assist prof.Dr Muayd
14	11/5/2025	Reactive oxygen species ROS	Assist prof.Dr Muayd
بمشاركة كل من م.م. خليل ابراهيم / م.م. عباس عبدالوهاب / م.م. زينب حارث مهدي / م.م. رغد			

الفصل الثاني 2024- 2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: Experimental Embryology
(Theory)
الوحدات: 2T=2C.H.



جامعة النهرين
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والتقنيات المساعدة على الإنجاب
قسم علم الأجنة التطبيقي

NO	Date (week start)	Lecture Topic	Lecturer
1	9/2/2025	Sperm viability and function test I	Dr. Amal A. Mohammed
2	16/2/2025	Sperm viability and function test II	Dr. Amal A. Mohammed
3	23/2/2025	Clinical impact of sperm antibody	Dr. Rehab Al-Maliki
4	2/3/2025	Sperm preparation for gender selection	Assist.prof Ban Thabit
5	9/3/2025	Applications of sperm preparation techniques for IUI	Assist.prof Ban Thabit
6	16/3/2025	Testicular biopsy and histology	Prof Dr. Ula Alkawaz
7	23/3/2025	Immunocytochemistry	Dr. Rehab Al-Maliki
8	30/3/2025	Cell and Tissue culture	Dr. Amal A. Mohammed
9	6/4/2025	Mid-term Examination	
10	13/4/2025	Immunology of implantation	Dr. Rehab Al-Maliki
11	20/4/2025	Cryology	Dr. Amal A. Mohammed
12	27/4/2025	Cryo-Protectants	Dr. Amal A. Mohammed
13	4/5/2025	Applied Cryopreservation	Dr. Amal A. Mohammed
14	11/5/2025	Experimental avain embryology	Assist.prof Ban Thabit
15	18/5/2025	Experimental Mammalian Embryology	Assist.prof Ban Thabit

الفصل الثاني 2024- 2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: Experimental Embryology:
(Practical)
الوحدات: 2T=2C.H.



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قسم علم الأجنة التطبيقي

NO	Date	Lecture Topic	Lecturer
1	9/2/2025	Sperm viability and function test I	Dr. Amal A. Mohammed
2	16/2/2025	Sperm viability and function test II	Dr. Amal A. Mohammed
3	23/2/2025	Clinical impact of sperm antibody	Dr. Rehab Al-Maliki
4	2/3/2025	Testicular biopsy	Dr. Rehab Al-Maliki
5	9/3/2025	Sperm activation test I	Assist.prof Ban Thabit
6	16/3/2025	Sperm activation test II	Assist.prof Ban Thabit
7	23/3/2025	Sperm preparation for gender selection	Assist.prof Ban Thabit
8	30/3/2025	Revision	Assist.prof Ban Thabit
9	6/4/2025	Mid exam	
10	13/4/2025	Tools and lab set-up for cryopreservation I	Dr. Amal A. Mohammed
11	20/4/2025	Tools and lab set-up for cryopreservation II	Dr. Amal A. Mohammed
12	27/4/2025	Embryo and gamete freezing	Dr. Amal A. Mohammed
13	4/5/2025	Cryo- banks	Dr. Amal A. Mohammed
14	11/5/2025	Verification of gamete and embryo	Dr. Amal A. Mohammed
15	18/5/2025	Revision	Dr. Amal A. Mohammed
بمشاركة كل من م.م. علي عباس/ م.م. ريم قيس/ م.م. مريم حسين/ م.م. راح عبد الفتاح/ م.م. تقى محمد			

الفصل الثاني 2024 - 2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: Teratology & Birth Defects
(Theory)
الوحدات: 1T=1C.H.:



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NO	Date	Lecture Topic	Lecturer
1	9/2/2025	Basic of genetic disorders	Lec.Dr Rehab Shafiq
2	16/2/2025	Single mutant gene disorders in teratology	Lec.Dr Rehab Shafiq
3	23/2/2025	Chromosomal abnormalities in teratology	Lec.Dr Rehab Shafiq
4	2/3/2025	Multifactorial inheritance disorders in teratology	Lec.Dr Rehab Shafiq
5	9/3/2025	Epigenetic and birth defects -	Lec.Dr Rehab Shafiq
6	16/3/2025	Infectious agents as teratogens	Lec.Dr Rehab Shafiq
7	23/3/2025	Head and neck malformations	Dr Rana Alsaadi
8	30/3/2025	Mid-Term Examination	
9	6/4/2025	Perinatal diagnosis of birth defects	Dr. Ali Ibrahiem
10	13/4/2025	Management of birth defects & foetal therapy	Dr. Ali Ibrahiem
11	20/4/2025	Fotal circulation and congenital heart diseases	Dr Rana Alsaadi
12	27/4/2025	Uro-genital and male reproductive system malformations	Dr Rana Alsaadi
13	4/5/2025	Congenital malformation of female reproductive system	Dr Rana Alsaadi
14	11/5/2025	Musculoskeletal system congenital abnormalities	Ban thabit Assist. Prof
15	18/5/2025	CNS malformations	Dr Rana Alsaadi

الفصل الثاني 2024 - 2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: English
(Theory)
الوحدات: 1 = 1 C.H.



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والتقنيات المساعدة على الإنجاب
قسم علم الأجنة التطبيقي

NO	Date	Lecture Topic	Lecturer
1	9/2/2025	Introduction:	Lec.Dr. Saher
2	16/2/2025	Unit 6: Science and our world Reading, p. 34-35 & Writing p. 31	Lec.Dr. Saher
3	23/2/2025	Unit 6: Science and our world Vocabulary Development p. 32 & Review p. 33	Lec.Dr. Saher
4	2/3/2025	Unit 7: People: past & present Reading, p. 40-41 & Research p. 42-43	Lec. Dr. Saher
5	9/3/2025	Unit 7: People: past & present Writing, p. 43-44 & Review p. 45	Lec. Dr. Saher
6	16/3/2025	Unit 8: The world of IT Reading: Computers, p. 46-47 & Writing, IT, p. 48	Lec. Dr. Saher
7	23/3/2025	Unit 8: The world of IT Vocabulary Development p. 49 & Review p. 51	Lec. Dr. Saher
8	30/3/2025	Listening Skills: Listening Comprehension Exercises	Lec. Dr. Saher
9	6/4/2025	Exam	Lec. Dr. Saher
10	13/4/2025	Unit 9: Inventions, discoveries, and processes Reading, How things work p. 52-53	Lec. Dr. Saher
11	20/4/2025	Unit 9: Inventions, discoveries, and processes Research, Reference books, p. 55-56 & Review p. 58	Lec. Dr. Saher
12	27/4/2025	Unit 10: Travel and Tourism Reading: International tourism p. 58-59 & Vocabulary Development p. 60	Lec. Dr. Saher
13	4/5/2025	Unit 10: Travel and Tourism Writing, p. 61-62 & Review, p. 51	Lec. Dr. Saher
14	11/5/2025	Listening Comprehension Exercises	Lec. Dr. Saher
15	18/5/2025	Review	Lec. Dr. Saher

الفصل الثاني 2024- 2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: ART Theory (hour/week): 2 hours
(Theory)
الوحدات: 2T+3P=3C.H



جامعة النهرين
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والتقنيات المساعدة على الإنجاب
قسم علم الأجنة التطبيقي

NO	Date	Lecture Topic	Lecturer
1	9/2/2025	Hormonal therapy in Infertility	Assist prof. Dr. Wasan Adnan
2	16/2/2025	Techniques of ova retrieval and embryo transfer	Assist prof. Dr. Wasan Adnan
3	23/2/2025	Biochemistry of culture media	Lec. Dr. Amal A Mohammed
4	2/3/2025	Cytoplasmic and extra cytoplasmic features of oocyte and oocyte grading	Lec. Dr. Amal A Mohammed
5	9/3/2025	ART application: Oocyte maturation in vitro IVM and IVF	Lec. Dr. Usama Alsultani
6	16/3/2025	Embryo Fragmentation	Lec. Dr. Amal A Mohammed
7	23/3/2025	Normal and abnormal embryo development and embryo grading	Lec. Dr. Amal A Mohammed
8	30/3/2025	Mid-term Examination	
9	6/4/2025	Micro – manipulation techniques and ICSI	Dr Usama Alzubaidi
10	13/4/2025	Blastocyst culture and embryo transfer techniques	Assist prof. Dr Hayder A.L.Mossa
11	20/4/2025	Blastomer biopsy and assisted hatching	Assist prof. Dr Hayder A.L.Mossa
12	27/4/2025	Pre-implantation genetic diagnosis and embryonic genetics PGD	Assist prof. Dr Hayder A.L.Mossa
13	4/5/2025	Complication of ART	Assist prof. Dr. Wasan Adnan
14	11/5/2025	Ethical aspects of ART	Assist prof. Dr. Raad Ghazi

الفصل الثاني 2024 - 2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: ART practical:
(Practical)
الوحدات = 2T+3P=3C.H .:



جامعة النهرين
المعهد العالي لتشخيص العقم
والتقنيات المساعدة على الإنجاب
قسم علم الأجنة التطبيقي

NO	Date	Practical	Lecturer
1	9/2/2025	Quality control of ART lab and lab ethics	Dr. Amal A Mohammed
2	16/2/2025	Applications of sperm preparation techniques for IUI	Dr. Amal A Mohammed
3	23/2/2025	Applications of sperm preparation techniques for ICSI and IVF	Dr. Amal A Mohammed
4	2/3/2025	IVF technique/ Identification of oocyte IGrading of Oocyte	Dr. Amal A Mohammed
5	9/3/2025	IVF technique/ Insemination of oocyte IVF technique/ Maturation of oocyte II	Dr. Amal A Mohammed
6	16/3/2025	IVF technique/ Ferti.-check on day 1 Classification of 2PN	Dr. Amal A Mohammed
7	23/3/2025	IVF technique/ Grading of blastocyst Selection of blastocyst for embryo transfer	Dr. Amal A Mohammed
8	30/3/2025	Mid-Term Examination	
9	6/4/2025	Embryo assessment and loading	Dr. Amal A Mohammed
10	13/4/2025	ICSI technique (setting) and gamete preparations (Sperm& ovum)	Dr. Amal A Mohammed
11	20/4/2025	ICSI technique (setting) and gamete preparations (Sperm& ovum)	Lec. Dr. Usama Alsultani
12	27/4/2025	ICSI technique and embryo culturing	Dr. Amal A Mohammed
13	4/5/2025	ICSI technique and embryo culturing	Lec. Dr. Usama Alsultani
14	11/5/2025	Embryo assessment and loading	Lec. Dr. Usama Alsultani

بمشاركة كل من م.م. رامج عبدالفتاح / م.م. علي عباس / م.م. مريم حسين / م.م. صفا عبدالكريم

الفصل الثاني 2024 - 2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: Special Embryology:
(Theory)
الوحدات: 2T+3P=3C.H.:



جامعة النهرين
المعهد العالي لتشخيص العقم
والتقنيات المساعدة على الإنجاب
قسم علم الأجنة التطبيقي

NO	Date	Lecture Topic	Lecturer
1	9/2/2025	Development of the axial Skeletal system - skull - vertebral column	Dr. Rana Alsaadi
2	16/2/2025	The development of the muscular system: - innervations of muscular - skeletal smooth cardiac muscle	Assist.prof. Ban thabit
3	23/2/2025	Limb development	Assist.prof. Ban thabit
4	2/3/2025	Development of cardio cardiovascular system -septum of the heart-	Dr. Rana Alsaadi
5	9/3/2025	vascular system	Dr. Rana Alsaadi
6	16/3/2025	Urogenital system (I) Urogenital system (II)	Prof. Dr Ula Alkawaz
7	23/3/2025	Mid-Term Examination	
8	30/3/2025	Digestive system	Dr. Rana Alsaadi
9	6/3/2025	Head & neck	Dr. Rana Alsaadi
10	13/4/2025	Respiratory system development	Assist prof. Dr. Raed Ghazi
11	20/4/2025	Development of the spinal cord & brain	Dr. Rana Alsaadi
12	27/4/2025	Development of the cranial nerves & autonomic nervous system	Dr. Rana Alsaadi
13	4/5/2025	Development of ear	Assist.prof. Ban thabit
14	11/5/2025	Development of eye	Dr. Rana Alsaadi
15	18/5/2025	Integumentary system	Dr. Rana Alsaadi

الفصل الثاني 2024- 2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: Special Embryology
Practical
الوحدات: 2T+3P=3C.H.



جامعة النهرين
المعهد العالي لتشخيص العقم
والتقنيات المساعدة على الإنجاب
قسم علم الأجنة التطبيقي

NO	Date	Practical	Lecturer
1	9/2/2025	Embryonic of bone: Somite, sclerotome dermatome, myotome, noto cord	Dr. Rana Alsaadi
2	16/2/2025	Embryonic of Muscles: Vertebral column, intervertebral disc, limp bud, apical ectodermal ridge	Dr. Rana Alsaadi
3	23/2/2025	Embryonic of cavities: peritoneal, pleural, and pericardial cavities, embryonic coelom	Dr. Rana Alsaadi
4	2/3/2025	The Embryonic heart: pericardial cavities, ventricle, atrium, bulbus codes, heart mesoderm, atrioventricular canal	Dr. Rana Alsaadi
5	9/3/2025	Embryonic of blood vessels: dorsal aorta, aortic arches, common cardinal vein, ductus venosus, vitelline vein	Lec. Dr. Usama Alsultani
6	16/3/2025	Embryology of digestive system: liver, pancreas, stomach, intestine, gall bladder	Lec. Dr. Usama Alsultani
7	23/3/2025	Mid-Term Examination	
8	30/3/2025	Embryology of central nervous system: primitive streak, anterior neuropore, neural plate, prosencephalon, mesencephalon, rhombencephalon	Assist.prof. Ban thabit
9	6/4/2025	Embryology of peripheral nervous system	Assist.prof. Ban thabit
10	13/4/2025	Histo-Embryology of nervous system	Assist.prof. Ban thabit
11	20/4/2025	Embryology of Gut: Foregut, midgut, hindgut, mouth, Pharynx, esophagus	Assist.prof. Ban thabit
12	27/4/2025	Embryology of head and neck: pharyngeal arches, pharyngeal pouches, pharyngeal clefts, tongue, maxillary process, mandible,	Assist.prof. Ban thabit
13	4/5/2025	Embryology of renal system: mesonephrous, mesonephric tubules, mesonephric glomeruli, mesonephric duct	Assist.prof. Ban thabit
14	11/5/2025	Embryology of female genital organs: uterus, ovary, oviduct	Lec. Dr. Usama Alsultani
15	18/5/2025	Embryology of male genital organs: testes, genital ridge, epididymis	Lec. Dr. Usama Alsultani
بمشاركة كل من م.م. تقى محمد / م.م. صفا عبد الكريم / م.م. ليلى احمد / م.م. ريم قيس / م.م. غادة			

الفصل الثاني 2024- 2025
دراسة الماجستير في علم الأجنة التطبيقي
الموضوع: Seminar
الوحدات: 2T=2C.H.



جامعة النهرين
المعهد العالي لتشخيص العقم
والتقنيات المساعدة على الإنجاب

Research Methods & Seminars: Theory

Topics	The Lecturer	Date
Introduction to Research Methods, Thesis Process	Assist. Prof. Dr. Essraa M. Al-Essawe	9/2/2025
Literature Review and Problem Statement	Assist. Prof. Dr. Essraa M. Al-Essawe	16/2/2025
Research Design and Methodology	Assist. Prof. Dr. Essraa M. Al-Essawe	23/2/2025
Data Collection and Analysis Advanced Statistical Analysis	Assist. Prof. Dr. Essraa M. Al-Essawe	2/3/2025
Ethical Considerations in Research and Publication	Assist. Prof. Dr. Essraa M. Al-Essawe	9/3/2025
Thesis Structure and Organization Writing the Introduction	Assist. Prof. Dr. Essraa M. Al-Essawe	16/3/2025
Examination	Assist. Prof. Dr. Essraa M. Al-Essawe	23/3/2025
Writing the Methodology and Results Sections	Assist. Prof. Dr. Essraa M. Al-Essawe	30/3/2025
Writing the Discussion and Conclusion Sections	Assist. Prof. Dr. Essraa M. Al-Essawe	6/4/2025
Citation and Referencing Management	Assist. Prof. Dr. Essraa M. Al-Essawe	13/4/2025
Abstract Writing and Summarizing the Thesis	Assist. Prof. Dr. Essraa M. Al-Essawe	20/4/2025
Manuscript Preparation and Publication Process I	Assist. Prof. Dr. Essraa M. Al-Essawe	27/4/2025
Manuscript Preparation and Publication Process II	Assist. Prof. Dr. Essraa M. Al-Essawe	4/5/2025
Presenting Research Findings	Assist. Prof. Dr. Essraa M. Al-Essawe	11/5/2025
Final Presentations	Assist. Prof. Dr. Essraa M. Al-Essawe	18/5/2025