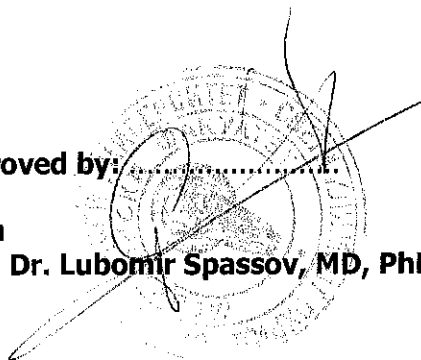


Approved by:

Dean
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Sofia University "St Kliment Ohridski", Faculty of Medicine, Academic Year 2017-2018

SYLLABUS

Obstetrics & Gynaecology

END-OF-TERM EXAM and FINAL STATE CERTIFICATION EXAM

AIM

The aim of Obstetrics & Gynaecology (Ob/Gyn) subject is to provide students with a grounding in Ob/Gyn with its simple applications, as well as with some understanding of ethical issues, legal issues & medical professionalism.

LINKS TO OTHER SUBJECTS (a noncomprehensive list):

SUBJECT	TOPICS OF IMPORTANCE FOR THE STUDY OF OB/GYN
Human Embryology	Antenatal ontogeny (embryogenesis) of the human being.
Clinical Anatomy	Structure and topography of <ul style="list-style-type: none">• the female pelvis & the organs inside;• the female perineum & external genitalia;• the female lower urinary tract;• body systems of the newborn infant.
Physiology	Biological messengers. The functions of the reproductive system & their regulation. Functional characteristics of the newborn infant.
Anatomical Pathology	Nature & morphological features of basic processes occurring in human cells & tissues: proliferation, hypertrophy, hyperplasia, secretion, inflammation, degeneration, necrosis, cicatrization, atrophy, metaplasia, malignant transformation, etc. Special methods of investigation. Handling of cell & tissue specimens.
Human Genetics	Pedigrees. Chromosomes & chromosomal alterations. Genes & DNA. Laboratory techniques for genetic analysis.
Laboratory Medicine	Selection & interpretation of the appropriate tests.
Biophysics	Medical imaging. Medical ultrasound.
Clinical Pharmacology	Mechanism of action, efficiency, side effects & safety of drugs for Ob/Gyn purposes.
General Surgery	Basic surgical techniques. Minimally invasive surgery.
Urology	Urinary incontinence. Congenital anomalies of the lower urinary tract. Trauma on the female lower urinary tract.
Neonatology	Fetal & perinatal medicine, incl. neonatal resuscitation & intensive care.
Internal Medicine	Evaluation of the health status of pregnant women & gynaecological patients. Medical disorders in pregnancy.
Endocrinology	Hypothalamo-pituitary-ovarian (HPO) axis. Relationship of the activity of the HPO axis with other endocrine organs.
Medical & Radiation Oncology	Treatment of gynaecological cancer.
Anaesthesiology & Intensive Care	Pain relief in Ob/Gyn. Ob/Gyn emergencies. Neonatal resuscitation & intensive care.

SUBJECT	TOPICS OF IMPORTANCE FOR THE STUDY OF OB/GYN
Epidemiology	Distribution and determinants of health-related states or events, namely <ul style="list-style-type: none"> • sexually transmitted infections (STIs); • hospital-acquired infections in Ob/Gyn; • gynaecological cancer; • genetic disorders causing congenital anomalies; • other states or events.
Public Health	Reproductive/sexual health.
Forensic Medicine & Medical Deontology	Ob/Gyn malpractice. Sexual assault. Bioethics.

OBJECTIVES

On completion of the subject Ob/Gyn students should demonstrate knowledge, skills and attitudes with the ultimate aim to

- analyze people's complaints & questions in the field of human reproduction;
- advance competent counselling to people with such complaints & questions;
- engage in activities intended for the prevention of reproductive & sexual health;
- recognize both normal & abnormal states or events occurring during pregnancy, labour, delivery & post partum;
- investigate & diagnose common gynaecological disorders, incl. STIs;
- provide basic medical care for common Ob/Gyn disorders, incl. STIs;
- work out & evaluate management strategies intended for Ob/Gyn patients;
- feel at ease in buildings & premises, designed for medical management of Ob/Gyn patients (both outpatients & inpatients);
- be familiarized with the basic instruments & devices in routine use in Ob/Gyn practice, as well as with their operating principles;
- conform their Ob/Gyn practice to the existing legal documents & regulations.

Students should be able to

1. Discuss normal reproductive physiology and provide definitions for states or events in Ob/Gyn.
2. Identify reasons for urgent admission to gynaecology and labour wards.
3. Take a comprehensive gynaecological, obstetric and sexual history.
4. Examine patients in Ob/Gyn, perform genital examination, perform routine examination of a newborn infant.
5. Select appropriate imaging techniques, laboratory tests, morphological & functional investigations; comment upon the findings.
6. Recognize symptoms & signs of
 - 6.1. Pregnancy, incl. miscarriage & ectopic pregnancy.
 - 6.2. Medical disorders in pregnancy.
 - 6.3. Obstetric haemorrhage.
 - 6.4. Pregnancy-induced hypertension.
 - 6.5. Intrauterine growth restriction.

- 6.6. Preterm labour & prematurity.
- 6.7. Multiple pregnancy.
- 6.8. Fetal malpresentations & malpositions.
- 6.9. Post-term pregnancy.
- 6.10. Disturbances of fetal well-being.
- 6.11. Normal labour & departures from the norm.
- 6.12. Postpartum bleeding and other obstetric emergencies.
- 6.13. Puerperium & postnatal problems.
- 6.14. Genital infections, incl. STIs.
- 6.15. Menstrual disorders.
- 6.16. Pelvic pain.
- 6.17. Premenstrual syndrome.
- 6.18. Puberty.
- 6.19. Menopause.
- 6.20. Genital prolapse.
- 6.21. Urinary incontinence.
- 6.22. Ovarian neoplasms.
- 6.23. Uterine cancer.
- 6.24. Cervical intraepithelial neoplasia and cancer.
- 6.25. Trophoblastic disorders.
- 6.26. Gynaecological emergencies.
- 7.** Understand the principles of routinely performed gynaecological and obstetric operative procedures, as well as their most important complications.
- 8.** Describe the range of options for management and formulate management strategies for Ob/Gyn cases and STI.
- 9.** Collect cervical samples for screening purposes, perform specimen labeling, interpret the results.
- 10.** Perform a basic medical estimation of and provide routine care to
 - 10.1. Pregnant patients before and after onset of labour.
 - 10.2. Newborn infants.
 - 10.3. Mothers in their initial postpartum weeks.
 - 10.4. Patients with gynaecological problems.
 - 10.5. Patients with STI.
 - 10.6. Cases of Ob/Gyn emergencies.
- 11.** Perform a basic medical estimation of and provide counselling to
 - 11.1. Girls of prepubertal / pubertal age and their parents (guardians).
 - 11.2. Infertile couples.
 - 11.3. Healthy individuals, concerning
 - o prevention of cervical & breast cancer;
 - o family planning — hormonal & physical contraception, natural birth control, as well as long acting & postcoital contraception;
 - o induced abortion;
 - o prevention of STIs;
 - o antenatal care & surveillance of pregnancy;

- prenatal screening & fetal morphology scan;
- pain relief in labour & surgery;
- C-section on request;
- homebirth.

11.4. Healthy mothers in their initial postpartum weeks.

11.5. Healthy menopausal / perimenopausal women.

12. Originate, store, protect & share medical information, exigible in Ob/Gyn health facilities.

RECOMMENDED READINGS

1. *Danforth's Obstetrics and Gynecology*, 10th Edition, Lippincott Williams and Wilkins, 2008
2. *Williams Obstetrics*, 24th Edition, McGraw-Hill Education, 2014.
3. *Berek & Novak's Gynecology*, 15th Edition, Lippincott Williams and Wilkins, 2012
4. *Fanaroff & Martin's Neonatal-Perinatal Medicine*, 10th Edition, Elsevier, 2015.

TECHNICAL DETAILS

Both *end-of-term exam* & *final state certification exam* consist in an INTERVIEW. Students are interviewed by three-member commissions. Topics of the interview are to be found in two questionnaires, one for the *end-of-term exam* and another for the *final state certification exam*.

Randomization of topics relies on drawing from a set of tickets.

To pass the *end-of-term exam* students are expected to elaborate on topics, pertaining to *Questionnaire 1*.

1. Topics are grouped in four sections:

- Section 1: *Fundamentals of Ob/Gyn*;
- Section 2: *Clinical Obstetrics; Obstetric Surgery; Fetal & Perinatal Medicine*;
- Section 3: *Clinical & Surgical Gynaecology*;
- Section 4: *Reproductive/Sexual Health & Reproductive Medicine*.

There are 3 (three) topics listed on each ticket. The first topic pertains to Section 1. The second topic pertains to Section 2. The third topic pertains either to Section 3 or to Section 4.

To pass the *final state certification exam* students are expected to elaborate on topics, pertaining to *Questionnaire 2*. Topics are grouped in two sections:

- Section 1: *General topics*;
- Section 2: *Specific topics*.

There are 2 (two) topics listed on each ticket. The first topic pertains to Section 1. The second topic pertains to Section 2.

Elaborating on topics, listed on the tickets, is not enough for passing the exams. Members of the commissions are *interviewing* the students, i.e. they may choose to ask specifying questions, related to the listed topics, or ask questions related to additional topics, not listed on the tickets.

The scores achieved in the exams vary from 2 to 6 as follows: poor (2), satisfactory (3), good (4), very good (5), excellent (6).

If students have demonstrated particularly blunt medical ignorance in elaborating on a single topic, their achievement is scored poor (2), notwithstanding their elaboration on other topics.

Score poor (2) means that the student did not pass the exam.

QUESTIONNAIRE 1
(End-of-Term Exam)

Section 1: *Fundamentals of Ob/Gyn*

1. Structure and functions of the female reproductive system.
2. Embryology of the female reproductive system.
3. Biological messengers in the female reproductive system.
4. Regulation of the female reproductive system.
5. Gametogenesis.
6. The ovary. Folliculogenesis. Ovulation.
7. Steroidogenesis.
8. The Fallopian tube.
9. Fertilization. Implantation of the embryo.
10. Human embryogenesis. Fetal appendages.
11. Uterine body. Cyclic changes of endometrium.
12. Menstruation.
13. Regulation of the menstrual cycle.
14. Uterine isthmus & uterine cervix.
15. The vagina. Normal vaginal microbiota.
16. The female external genitalia. Genital mutilation.
17. The female perineum.
18. The female bony pelvis.
19. The pelvic floor.
20. The blood supply & lymphatic drainage of female genitalia & pelvic organs.
21. The innervation of female genitalia & pelvic organs.
22. Development stages of the female reproductive system: newborn & infant, childhood, puberty.
23. Development stages of the female reproductive system: menopause & climacteric.
24. The Ob/Gyn patient's evaluation. The Ob/Gyn & sexual history.
25. Pelvic examination.
26. Clinical obstetric examination.
27. Medical imaging in Ob/Gyn. Obstetric ultrasound. Other procedures based on ultrasound.
28. Colposcopy & episioscopy.
29. Gynaecological diagnostic laparoscopy.
30. Diagnostic hysteroscopy. Fetoscopy.
31. Collecting cell & tissue specimens for Ob/Gyn purposes.
32. Cytomorphological & histomorphological investigations in Ob/Gyn.
33. Pathogenic microorganisms in Ob/Gyn. Microbiological testing in Ob/Gyn.
34. Clinical & molecular genetics in Ob/Gyn.
35. Functional investigations in Ob/Gyn.
36. Pain relief in Ob/Gyn.
37. Hospital-acquired infections in Ob/Gyn.
38. Practising Ob/Gyn: health facilities, teamwork, interdisciplinary specialties.

39. Culpability & amenability in practising Ob/Gyn. Quality of care in Ob/Gyn. Risk management.

Section 2: *Clinical Obstetrics. Obstetric Surgery. Fetal & Perinatal Medicine.*

40. The normal pregnancy. Physiological changes on the pregnant woman's body, organs & systems.
41. Obstetric evaluation of early pregnancy.
42. Obstetric evaluation of mid-pregnancy & advanced pregnancy.
43. The lifestyle of pregnant women.
44. Antenatal screening. Antenatal diagnosis. Fetal morphology scan.
45. Antenatal care. Follow-up of normal pregnancy.
46. The transition from pregnancy to delivery.
47. The normal delivery.
48. Clinical progress in labour. Conduct of 1st stage.
49. Conduct of 2nd & 3rd stage of labour.
50. Anatomy & physiology of the newborn infant.
51. Routine neonatal care. Neonatal resuscitation & intensive care.
52. Neonatal diagnosis. Common disorders of the newborn infant.
53. The normal puerperium.
54. Puerperal disorders.
55. Multiple pregnancy.
56. Breech presentation.
57. Obstetric haemorrhage. Miscarriage.
58. Ectopic pregnancy.
59. Hydatidiform mole.
60. Placenta praevia.
61. Placental abruption.
62. Fetal haemolytic disease.
63. Medical disorders in pregnancy. Surgery in pregnancy.
64. Gynaecological neoplasms in pregnancy.
65. Vomiting & other gastrointestinal problems in pregnancy.
66. Infections in pregnancy.
67. Pregnancy-induced hypertension.
68. Preterm labour. Prematurity. Cervical cerclage.
69. Post-term pregnancy. Induction of labour.
70. Fetal distress & antenatal fetal death.
71. Dystocia. Mechanism of labour in malpresentations.
72. Prognosis for the pregnancy & the delivery. Homebirth.
73. Operative delivery.
74. Birth injuries.
75. Postpartum bleeding.
76. Obstetric emergencies.
77. Maternal mortality, stillbirth & neonatal death.

Section 3: *Clinical & Surgical Gynaecology*

78. Vaginal discharge. Inflammations of the female lower genital tract.
79. Pelvic inflammatory disease.
80. Chronic pelvic pain.
81. Premenstrual syndrome.
82. Vaginal bleeding.
83. Amenorrhoea.
84. Adverse effects & gynaecological disorders in infancy & adolescence.
85. Adverse effects & gynaecological disorders in menopause & postmenopause.
86. Polycystic ovary syndrome.
87. Genital tract malformations.
88. Sex variations & intersex.
89. The so-called cervical erosion.
90. Endometriosis.
91. Genital prolapse.
92. Urinary incontinence.
93. Epidemiology, genetics, biology & staging of invasive neoplasms of female reproductive organs.
94. Cervical intraepithelial neoplasia.
95. Cervical cancer.
96. Prae-neoplastic lesions of the endometrium.
97. Uterine cancer.
98. Uterine fibroids. Uterine sarcomas.
99. Cancer of ovaries, Fallopian tube & peritoneum.
100. Management strategy for adnexal masses.
101. Trophoblastic tumours.
102. Treatment protocols in gynaecologic oncology.
103. Anti-infective agents, pain killers, hormones, antihormones & hormone receptor modulators in Ob/Gyn practice.
104. Gynaecological surgery. Organisation & course of activities in performing gynaecological surgery.
105. Minimally invasive gynaecological surgery.
106. Hysterectomies. Other operations on the uterine body.
107. Surgery of the uterine cervix. Surgery of uterine appendages. Surgery of the vagina & external genitalia.
108. Complications of gynaecological surgery.
109. Gynaecological emergencies.

Section 4: *Reproductive/Sexual Health & Reproductive Medicine*

110. Reproductive & sexual health.
111. Sexuality, sexual behaviour, sexual function.
112. Contraception.
113. Termination of pregnancy.
114. Sexually transmitted infections.

- 115.** Primary & secondary prevention of cervical cancer.
- 116.** Infertility. Evaluation of the infertile couple.
- 117.** Female infertility of endocrine origin. Tubal factor infertility.
- 118.** Assisted reproductive technologies.

RELATIONSHIP BETWEEN LECTURES AND TOPICS FROM *QUESTIONNAIRE 1*

LECTURES	RELATED TOPICS FROM QUESTIONNAIRE 1
Opening lecture: the female reproductive system.	1, 2, 3, 4, 118
Gametogenesis.	5, 118
The ovary. Folliculogenesis. Ovulation. Steroidogenesis.	3, 6, 7, 35, 118
The Fallopian tube. Fertilization. Implantation. Placentation.	8, 9, 10, 118
Uterus: uterine body.	11, 87
Menstruation. Menstrual cycle.	12, 13
Regulation of the menstrual cycle.	3, 4, 13
Uterus: uterine isthmus, uterine cervix.	14, 47, 68, 74
The so-called cervical erosion.	89
The vagina. The so-called normal vaginal microbiota.	15, 47, 74, 92, 111
Cervicovaginal pathogens.	33, 78, 114
Inflammations of the female lower genital tract.	66, 78, 103, 114
External female genitalia.	16, 47, 111
Genital mutilation.	16
The female perineum.	17, 47, 92, 111
The female bony pelvis.	18, 47, 71
The pelvic floor.	19, 92, 93, 111
Blood supply & lymphatic drainage of the female reproductive organs.	20, 102, 104, 108
Innervation of the female reproductive organs & their surroundings.	21, 80, 93, 108
Development stages of the female reproductive system.	22, 84
The menopause.	23, 85
The Ob/Gyn patient's evaluation. Obstetric, gynaecological & sexual history. Pelvic examination. Clinical obstetric examination. Medical imaging.	24-27
Ultrasound physics. Ultrasound treatment. 2D ultrasound imaging.	27
2D ultrasound imaging. Doppler ultrasound.	27
Normal pregnancy. Physiological changes in the female organism during pregnancy.	24, 40, 65
Obstetric evaluation of early pregnancy.	24, 25, 28, 40, 41
Obstetric evaluation of mid-pregnancy & advanced pregnancy.	24, 26, 28, 35, 42
The lifestyle of pregnant women.	43
Fears of pregnant women.	43, 103
Prognosis for the pregnancy & the delivery. Follow-up of normal pregnancy.	41, 42, 44, 45, 72
The logical transition from pregnancy to delivery.	3, 4, 46
Endocrinology of labour.	3, 4, 46, 47
The normal labour & delivery.	18, 47
Biomechanics of vaginal birth.	18, 47
Clinical progress in labour. Conduct of 1 st stage.	3, 26, 48, 56, 103
Conduct of 2 nd & 3 rd stage of labour.	10, 47, 49, 62, 73, 74, 75
The newborn infant.	50, 51, 52, 62
The normal puerperium.	1, 3, 4, 53
Fetal distress ante partum.	35, 42, 61, 67, 69, 70
Fetal distress intra partum.	35, 61, 67, 69, 70, 71, 73, 76
Infections in pregnancy. Acute ascending infections.	33, 37, 54, 66, 68, 114
Chronic / recurrent genital infections & contagious diseases in pregnancy.	63, 66
Hypertensive states in pregnancy.	67, 70, 76
Obstetric haemorrhage. Miscarriage.	57, 77

LECTURES	RELATED TOPICS FROM QUESTIONNAIRE 1
Ectopic pregnancy.	58, 76, 77, 105, 107, 109
Hydatidiform mole. Trophoblastic disease.	9, 31, 32, 34, 59, 101
Placenta praevia.	60, 73, 76, 77
Placental abruption.	61, 67, 70, 73, 76, 77
Fetal haemolytic disease.	44, 52, 62, 77
Medical disorders in pregnancy. Genital tumours in pregnancy. Surgery in pregnancy.	63, 64, 65, 94, 95, 98
Multiple pregnancy.	24, 26, 28, 30, 55, 73
Breech presentation.	26, 56, 73
Preterm delivery.	68, 77
Dystocia. Fetal malpositions & malpresentations.	70, 71, 77
Obstetric aggression - Part 1: Induction of labour. Operative delivery.	69, 73
Obstetric aggression - Part 2: Other surgical interventions during pregnancy, delivery & puerperium.	30, 44, 54, 57, 58, 62, 63, 68, 75, 76
Antenatal screening & fetal morphology.	9, 28, 34, 44
Maternal & perinatal mortality.	54, 58-61, 67, 70-76, 77
Birth injuries.	74, 77
Postpartum bleeding.	75, 77
Puerperal disorders.	54, 77
Homebirth.	72
Clinical & molecular genetics in Ob/Gyn.	34, 44, 57, 59, 88, 93, 118
Colposcopy.	28, 94, 95, 115
Cytomorphological & histomorphological investigations in Ob/Gyn.	30, 31, 32, 59, 89, 90, 93-99, 115
Gynaecological semiology - Part 1: Vaginal discharge. Pelvic pain. Endometriosis. Pelvic inflammatory disease. Premenstrual syndrome.	78, 79-81, 90
Gynaecological semiology - Part 2: Menstrual disorders. Amenorrhea. Polycystic ovary syndrome.	82, 83, 86
Uterine myoma. Uterine sarcomas.	64, 98, 103, 106
Genital prolapse.	91, 104, 107
Urogynaecology.	93, 103, 104
Genital tract malformations.	87
Sex variations and intersex.	88
Gynaecological malignancies - Part 1: Epidemiology & genetics of invasive neoplasms of female reproductive organs. Atypism. Preinvasive disease. Histogenesis. Tumour biology.	93, 94, 96, 99
Gynaecological malignancies - Part 2: Tumour staging. Management & prognosis of gynaecological malignancies. Tumour progression. Treatment results.	93, 95, 97, 98, 99, 102, 106, 107
Gynaecological malignancies - Part 3: Primary & secondary prevention of gynaecological cancer.	27, 31, 32, 94, 107, 115
Gynaecological malignancies - Part 4: Two examples of providing basic management strategies - cervical intraepithelial neoplasia & adnexal masses.	89, 94, 99, 100, 115
Drugs in Ob/Gyn practice.	3, 48, 78-83, 103
Gynaecological surgery - Part 1: Types of gynaecological operations. Preoperative care. Surgical instruments. Minimally invasive gynaecological surgery. Complications of gynaecological surgery.	29, 30, 104, 105, 108
Gynaecological surgery - Part 2: Hysterectomies. Other operations on the uterine body. Surgery of the uterine cervix. Surgery of uterine appendages. Surgery of the vagina & external genitalia. Other gynaecological operations.	58, 86, 87, 90-92, 94-99, 102, 106, 107

LECTURES	RELATED TOPICS FROM QUESTIONNAIRE 1
Reproductive & sexual health. Sexuality, sexual behaviour, sexual function.	15-17, 19, 88, 110, 111
Sexually transmitted infections.	33, 114
Contraception.	3, 103, 112
Termination of pregnancy.	3, 31, 103, 113
Infertility.	4-9, 35, 116, 117
Assisted reproductive technology.	3, 34, 35, 103, 118
Pain relief in Ob/Gyn.	36 , 48, 73, 107
Ob/Gyn emergencies.	58, 67, 70, 73-75, 76 , 79, 104-106, 109
Hospital-acquired infections in Ob/Gyn.	37
Practising Ob/Gyn.	38
Culpability & amenability. Quality of care in Ob/Gyn. Risk management.	39

QUESTIONNAIRE 2
(Final State Certification Exam)

Section 1: General topics

1. Fundamentals of human reproduction.
2. Menstruation. Menstrual cycle.
3. Vaginal opportunistic pathogens & pathogens.
4. Development stages of the female reproductive system.
5. Normal pregnancy.
6. Antenatal care.
7. Follow-up of fetal development. Antenatal screening. Antenatal diagnosis.
8. Management of labour & delivery.
9. Operative delivery.
10. The newborn infant.
11. Maternal and perinatal mortality.
12. Clinical therapeutics & pharmacology of management of Ob/Gyn diseases.
13. Common surgical procedures, preoperative & postoperative care in gynaecology.
14. Family planning.
15. Primary & secondary prevention of gynaecological malignancies.

Section 2: Specific topics

16. Medical conditions complicating pregnancy.
17. Early pregnancy complications.
18. Mid- & late pregnancy complications.
19. Complications of labour & delivery.
20. The puerperium. Postpartum complications.
21. Gynaecological semiology: vaginal discharge, vaginal bleeding, pelvic pain.
22. Amenorrhoea.
23. Benign gynaecological conditions.
24. Genital prolapse & urogynaecology.
25. Gynaecological disorders in infancy & adolescence.
26. Menopause & climacteric.
27. Gynaecologic malignancies.
28. Sexually transmitted infections.
29. Infertility & assisted reproductive technology.
30. Ob/Gyn emergencies.

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