ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

Ε Θ . Α . Α . Ε .

ΕΘΝΙΚΗ ΑΡΧΗ ΑΝΩΤΑΤΑΤΗΣ ΕΚΠΑΙΔΕΥΣΗΣ

HELLENIC REPUBLIC

Η .Α .Η . Ε .

HELLENIC AUTHORITY FOR HIGHER EDUCATION

University of West Attica

School of Health and Care Sciences

Department of Biomedical Sciences and Midwifery

Undergraduate Studies

"Applications of Biomedical Technology in Infertility - Male and Female Factor"

Course Outline

LIFESTYLE AND MALE FERTILITY

ATHENS 2023

COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Health and Care Sciences		
ACADEMIC UNIT	Biomedical Sciences and Midwifery		
LEVEL OF STUDIES	Undergraduate Studies		
COURSE CODE	MYE 3.1.1	SEMESTER	Third
COURSE TITLE	LIFESTYLE AND MALE FERTILITY		

INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*	WEEKLY TEACHIN GHOURS	CREDITS
Lectures, laboratory training	4	30
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail at (d).		

COURSE TYPE *General background, special background, specialized general knowledge, skills development*	*special background*
PREREQUISITE COURSES:	
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek, English
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	https://eclass.uniwa.gr/

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

The purpose of the course is for students to know and understand the potential burdens of daily life activities on male fertility. In addition, they can evaluate the possibility of dealing with infertility problems through the adoption of different habits.

The students after the end of the course:

1. They will know how many activities of daily life affect sperm quality and male fertility.
2. They can identify existing burdens in a man's history and recommend the necessary preventive tests.
3. They can advise on corrective actions that may be available for men experiencing fertility problems.
4. They are aware of the activities and habits that should be avoided in order to preserve male fertility.

General Competences
Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology *Adapting to new situations* *Decision-making* *Working independently* *Team work* *Working in an international environment* *Working in an interdisciplinary environment* *Production of new research ideas*	*Project planning and management Respect for difference and multiculturalism* *Respect for the natural environment* *Showing social, professional and ethical responsibility and sensitivity to gender issues* *Criticism and self-criticism* *Production of free, creative and inductive thinking* *……* *Others…* *…….*

- Search, analysis and synthesis of data and information, using the necessary technologies
- Team work
- Working in an international environment
- Working in an interdisciplinary environment Generating new research ideas
- Decision making
- Promotion of free, creative and inductive thinking

(3) SYLLABUS

1. Cannabis use and infertility
2. Electronic and conventional cigarette in infertility
3. Effect of radiation on infertility
4. Alcohol and addictive substances
5. Use of anabolic steroids
6. Obesity
7. Nutrition and sperm quality
8. Food supplements
9. Pharmaceutical treatments
10. Anticancer treatments
11. Environmental factors
12. Working conditions
13. Stress and reproduction

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	Face to face laboratory training	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	➢ Learning prosses support through electronic platforms: e class, Microsoft Teams, Skype Business ➢ Teaching by videos	
TEACHING METHODS *The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.* *The student's study hours for each learning activity are given as well as the hours of non- directed study according to the principles of the ECTS*	**Activity**	**Semester Workload**
	Lectures by audiovisual media	86
	Laboratory training in small groups of students 20-25	36
	Interactive teaching	32
	Literature study and analysis	53
	Study presentation	51
	Writing of thesis	51
	Independed study	27
	Course total	**336**
STUDENT PERFORMANCE EVALUATION *Description of the evaluation procedure* *Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open- ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other* *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*	1. Written final exam (60%) including: • Multiple Choice Questions • Short Answer Questions, • Problem Solving 2. Presentation of Individual or Group Work (40%)	

(5) ATTACHED BIBLIOGRAPHY

Suggested Bibliography:

1. Durairajanayagam D. Lifestyle Causes of Male Infertility Arab J Urol. 2018 Feb 13;16(1):10-20.
2. Gabrielsen JS, Tanrikut C. Chronic Exposures and Male Fertility: The Impacts of Environment, Diet, and Drug Use on Spermatogenesis. Andrology. 2016 Jul;4(4):648-61.
3. Ricci E, Al Beitawi S, Cipriani S, Candiani M, Chiaffarino F, Viganò P, Noli S, Parazzini F. Semen quality and alcohol intake: a systematic review and meta-analysis. Reprod Biomed Online. 2017 Jan;34(1):38-47.
4. La Vignera S, Condorelli RA, Balercia G, Vicari E, Calogero AE. Does alcohol have any effect on male reproductive function? A review of literature. Asian J Androl. 2013 Mar;15(2):221-5
5. Wawryk-Gawda E., Zarobkiewicz M. K., Chłapek K., Chylińska-Wrzos P., Jodłowska-Jędrych B. Histological changes in the reproductive system of male rats exposed to

cigarette smoke or electronic cigarette vapor. Toxicol Environ Chem. 2019 Dec;101(7-8):404-419
6. Rahali D., Jrad-Lamine A., Dallagi Y., Bdiri Y., Ba N., El May M., El Fazaa S., El Golli N. Semen Parameter Alteration, Histological Changes and Role of Oxidative Stress in Adult Rat Epididymis on Exposure to Electronic Cigarette Refill Liquid. Chin J Physiol. 2018 Apr 30;61(2):75-84.
7. Nudell DM, Monoski MM, Lipshultz LI. Common medications and drugs: how they affect male fertility. Urol Clin North Am. 2002 Nov;29(4):965-73.
8. Christou M., Christou P., Markozannes G., Tsatsoulis A., Mastorakos G., Tigas S., Effects of Anabolic Androgenic Steroids on the Reproductive System of Athletes and Recreational Users: A Systematic Review and Meta-Analysis. Sports Med. 2017 Sep;47(9):1869-1883.
9. Leme de Souza G., Hallak J. Anabolic Steroids and Male Infertility: A Comprehensive Review BJU Int. 2011 Dec;108(11):1860-5.
10. Payne KS., Mazur DJ, Hotaling JM., Pastuszak AW. Cannabis and Male Fertility: A Systematic Review. J Urol. 2019 Oct;202(4):674-681.
11. Gundersen TD. , Jørgensen N., Andersson A., Bang AK., Nordkap L., Skakkebæk N., Priskorn L., Juul A., Jensen TK. Association Between Use of Marijuana and Male Reproductive Hormones and Semen Quality: A Study Among 1,215 Healthy Young Men Am J Epidemiol. 2015 Sep 15;182(6):473-81.
12. Eisenberg ML. Invited Commentary: The Association Between Marijuana Use and Male Reproductive Health Am J Epidemiol. 2015 Sep 15;182(6):482-4.
13. Leisegang K., Dutta S. Do Lifestyle Practices Impede Male Fertility? Andrologia. 2020 Apr 24;e13595.
14. Giwercman A., Lundberg Giwercman Y. Environmental Factors and Testicular Function Best Pract Res Clin Endocrinol Metab. 2011 Apr;25(2):391-402.
15. Giwercman A., Rylander L., Lundberg Giwercman Y. Influence of Endocrine Disruptors on Human Male Fertility Reprod Biomed Online. 2007 Dec;15(6):633-42.
16. Yilmaz B., Terekeci H., Sandal S., Kelestimur F. Endocrine disrupting chemicals: exposure, effects on human health, mechanism of action, models for testing and strategies for prevention. Rev Endocr Metab Disord. 2020 Mar;21(1):127-147.
17. Samplaski MK., Nangia AK. Adverse effects of common medications on male fertility. Nat Rev Urol. 2015 Jul;12(7):401-13.
18. Suliga E., Głuszek S. The Relationship Between Diet, Energy Balance and Fertility in Men Int J Vitam Nutr Res. 2019 Apr 10;1-13.
19. 19.Karayiannis D., Kontogianni MD., Mendorou C., Douka L., Mastrominas M., Yiannakouris N. Association Between Adherence to the Mediterranean Diet and Semen Quality Parameters in Male Partners of Couples Attempting Fertility Hum Reprod. 2017 Jan;32(1):215-222.