

Optional course – main information	
Academic subject	Endocrinology of Human Reproduction
ECTS credits (CFU)	4
Compulsory attendance	No
Teaching language	Italian
Accademic Year	2019/2020

Professor/Lecturer	
Name & SURNAME	Marianna Ranieri
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Tutorial time/day	Every day after teacher appointment

Course details	Pass-fail exam/Exam with mark out of 30	SSD code	Type of class
	Exam with mark out of 30	BIO/09	Lecture and workshop

Teaching schedule	Semester	day and time (afternoon)	room
	II	Tuesday – 14:30 – 17:30	classroom

Lesson type	CFU/ECTS	Lessons (hours)	CFU/ECTS lab	Lab hours	CFU/ECTS tutorial/workshop	Tutorial/workshop hours	CFU/ECTS field trip	Field trip Hours
	4	32	0	0	0	0	0	0

Time management	Total hours	Teaching hours	Self-study hours
	100	32	68

Academic Calendar	First lesson	Final lesson
	2020 march	2020 may

Syllabus	
Course entry requirements	Knowledge of Cellular Physiology and Systems; Basic knowledge of Cytology and Histology; knowledge of Human Anatomy
Expected learning outcomes (according to Dublin Descriptors) (it is recommended that they are congruent with the learning outcomes contained in A4a, A4b, A4c tables of the SUA-CdS)	
Knowledge and understanding	Knowledge of the general principles of hormone and receptor functioning; knowledge of all hormones related to reproductive function and their regulation mechanisms. Knowledge of different diseases related to sex hormones. Knowledge of the main techniques of Medically Assisted Procreation (PMA).
Applying knowledge and understanding	Ability to correlate the deficit or hyperproduction of the various hormones to the different pathologies of the reproductive system and to discriminate the use of appropriate techniques of Fecundation.
Making informed judgements and choices	Ability to direct the choice to the correct contraceptive use; Ability to correctly guide the choice to natural breastfeeding methods; Ability to direct the choice to the correct type of PMA method to be used depending on the type of pathology.
Communicating knowledge and understanding	Ability to describe the individual reproductive and nervous systems related to the reproductive system; Ability to describe the individual hormones, the type and nature of the hormone and the specific related receptor on the target organ; Ability to describe the disease caused by the deficiency or overproduction of a hormone in terms of symptoms, etiology and therapy; Ability to describe the different contraceptive techniques and PMA techniques.
Capacities to continue	Ability to deepen and update knowledge in the field of Human Reproduction and the

learning	hormones that regulate its functioning.
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Syllabus	
Course content	<p><u>Principles of endocrinology (part 1)</u>: classification of hormones; hormones synthesis and action mechanisms; hormone receptors.</p> <p><u>Principles of Endocrinology (part 2)</u>: Neuroendocrine control of reproductive function: hypothalamic-pituitary axis; Hormonal secretion: from childhood to puberty. Puberty. Menarche. Abnormal Puberty.</p> <p><u>Male reproductive system</u>: functional anatomy (spermatogenesis) Testicular hormones: androgens and estrogens; Biosynthesis, blood transport, catabolism, biological effects and mechanism of action; role of testosterone in the hormonal regulation of testicular and sexual function. Hormonal regulation of male sexual function: stimulation of the sexual act, orgasm and the role of oxytocin in fertilization.</p> <p><u>Female reproductive system (part 1)</u>: functional anatomy (development of the ovarian follicle ...) Ovarian hormones: Estrogens, Progesterins, Ovarian androgens. Biosynthesis and mechanisms of action.</p> <p><u>Female reproductive system (part 2)</u>: Hormonal regulation of ovarian function: menstrual cycle and neuroendocrine regulation of the menstrual cycle; phases of ovarian activity (follicular and luteinic) and cyclic modifications of the ovary and uterus, feedback mechanisms. Interrelation between ovaries and other glands Premenstrual syndrome, abnormal uterine bleeding.</p> <p><u>Fertilization, Pregnancy and Childbirth</u>: Fertilization and Pregnancy: placental hormones. Childbirth and puerperium.</p> <p><u>Breastfeeding, Contraception and Fertility</u>: Milk formation and lactation. Contraceptives and fertility.</p> <p><u>Endocrine disorders of the reproductive system (part 1)</u>: Menopause and male and female climacteric Alterations of female hormonal function: amenorrhea. Dysmenorrhea, polycystic ovary syndrome, endometriosis, hyperandrogenism.</p> <p><u>Endocrine disorders of the reproductive system (part 2)</u>: Alterations of male hormonal function and testicular diseases: male hypogonadism, cryptorchidism, varicocele, testicular tumors. Hormone-secreting tumors: carcinoma of the breast, ovarian and cervical and endometrium, and prostate.</p> <p><u>Sterility and infertility</u>: Infertility Female, male and couple infertility. Techniques of medically assisted procreation (PMA).</p> <p>Seminar held by Dr. Y. Cho on Medically Assisted Procreation Techniques.</p>
Course books/Bibliography	Teacher's notes and material provided during the lessons; "Endocrinologia Clinica" Fabrizio Monaco- Editrice SEU
Notes	Only the chapters related to the topics covered by the course.
Teaching methods	Lectures will be presented through PC assisted tools (PowerPoint) and slide projector.
Assessment methods (indicate at least the type written, oral,	The exam consists of an oral test with questions related to the programme. For students enrolled at the course year in which the teaching is done there will be a

other)	test of written exam on the topics developed during the lessons in the classroom.
Evaluation criteria (Explain for each expected learning outcome what a student has to know, or is able to do, and how many levels of achievement there are	<p><u>Knowledge and understanding of the topics:</u> Describe the general principles of functioning of hormones and receptors; describe all the hormones related to reproductive function and their regulation mechanisms. Describe the different diseases related to sex hormones. Describe the main techniques of Medically Assisted Procreation (MAP).</p> <p><u>Knowledge and ability to apply the topics:</u> Evaluate the deficit or overproduction of the various hormones and correlate them to the different pathologies of the reproductive system; evaluate and discriminate the use of appropriate reproduction techniques.</p> <p><u>Making judgments:</u> Orient the choice to the correct contraceptive use; to correctly direct the choice to natural breastfeeding methods; direct the choice to the correct type of PMA method to be used depending on the type of pathology present.</p> <p><u>Communication skills:</u> describe the individual reproductive and nervous system related to the reproductive system; describe the individual hormones, the type and nature of the hormone and the specific related receptor on the target organ; to describe the pathology caused by the deficiency or overproduction of a hormone in terms of symptoms, aetiology and therapy; describe the different contraceptive techniques and PMA techniques.</p> <p><u>Learning skills:</u> to deepen and update knowledge in the field of Human Reproduction and the hormones that regulate its functioning.</p>
Further information	