DISCIPLINE SHEET

ACADEMIC YEAR

2022- 2023

1. DATA ABOUT THE STUDY PROGRAM

1.1 Institution of higher education	UNIVERSITY OF MEDICINE AND PHARMACY OF CRAIOVA
1.2 Faculty	**MEDICINE**
1.3 Department	**3**
1.4 Study Domain	HEALTH
1.5 Study cycle	LICENCE
1.6 Study program/ Qualification	MEDICINE

2. DATA ABOUT THE DISCIPLINE

2.1 DISCIPLINE NAME	**ENDOCRINOLOGY**				
2.2. Discipline code	MED 5209				
2.3 The holder of course activities	Assistant Professor Popescu Mihaela, Lecturer Răducanu-Lichiardopol Corina				
2.4 The holder of seminar activities	Assistant Professor Popescu Mihaela, Lecturer Răducanu-Lichiardopol Corina, Assistant Pavel Oana Roxana, Assistant Vasile Ionut Silviu				
2.5.Academic degree	Assistant Professor, Lecturer, Assistant				
2.6. Employment (base norm/associate)	base norm				
2.7. Year of study	**V**	2.8. Semester	**II**	2.9. Course type (content) 2.10. Regime of discipline (compulsoriness)	**CSD**

3. TOTAL ESTIMATED TIME (teaching hours per semester)

3.1 Number of hours per week	**3**	3.2 From which - course	**1**	3.3 seminary/laboratory	**2**
3.4 Total hours in curriculum	**42**	3.5 From which - course	**14**	3.6 seminary/laboratory	**28**
Time found distribution (hours)					
Study by manual, course support, bibliography, and notes					**13**
Additional documentation in the library, specialized electronic platforms and, on the field					**10**
Training seminars / labs, homework, reports, portfolios, and essays					**5**
Tutoring					
Examinations					**2**
Other activities, counselling, student circles					**3**

3.7 Total hours of individual study	**33**
3.9 Total hours per semester	**75**
3.10 Number of credits	**3**

4. PREREQUISITES (where appropriate)

4.1 curriculum	-
4.2 competency	-

5. CONDITIONS (where appropriate)

5.1. of curse deployment	-
5.2. of seminary/ lab deployment	-

6. SPECIFIC COMPETENCES ACCRUED

PROFESSIONAL COMPETENCES	• to establish healthcare needs and provide health care for prevention, therapy and rehabilitation; • to monitor the overall condition of the patients in anatomical and functional terms • to develop positive diagnosis, develop and implement a treatment plan, to apply and evaluate how the treatment is administered; • to contribute to protection and improvement of health • to develop programs and to conduct health education; • to facilitate actions to protect the health of groups considered at risk; • to carry out research in the general health services; • to prepare written reports on specific developed activities; • to collaborate efficiently in medical-surgical team • to know and follow the rules of ethics and medical deontology
TRANSVERSAL COMPETENCES	CT1. Autonomy and accountability; CT2. Social interaction; CT3. Personal and professional development

7. DISCIPLINE OBJECTIVES (based on the grid of specific competences acquired)

7.1 The general objective of the discipline	• to communicate with the patient in an appropriate manner • to express empathy for the patient • to obtain necessary information from the patient for presumptive diagnosis • to develop an appropriate plan of investigation appropriate for the clinical picture of the patient • to integrate into a team in order to participate in the activities of diagnosis and treatment of the patient • to acquire appropriate ethical behaviour and professional ethics • to develop their ability to apply, solve, build, develop ideas and concepts
7.2 The specific objectives of the discipline	• to analyze and synthesize the information they received regarding the patient's disease • to assess the level of knowledge and appreciate the need for cooperation with people with more experience • to acquire a range of skills and abilities necessary to exercise the medical profession • to acquire and consolidate examination techniques related to the ill and healthy rate • to develop positive and differential diagnosis • to establish a differentiated therapeutic strategy • to be able to incorporate other knowledge of the subject

8. CONTENTS

8.1 Course (content units)	Hours
I.THE OBJECT AND EVOLUTION OF ENDOCRINOLOGY. THE BASIC NOTIONS OF ENDOCRINOLOGY. The general organization of the endocrine system (the endocrine gland, hormones, hormone receptors), the neuroendocrinologic concept (neurosecretions and neurohormones: mechanism of hormones action and regulation of the endocrine system) gene control of the endocrine function, cronobiology of the hormones secretions, neuroendocrine system. Autoimmunity and the endocrine system.	1
II . HYPOTHALAMUS. Hypothalamus Morphology, Physiology and Disorders. Problems in the evaluation of the Hypothalamic-Pituitary Axis. Diabetes insipides. Galactorheea. Empty sella syndrome. Anorexia Nervosa.	1
III. HYPOTHALAMUS. Hypogonadotrophic hypogonadism, nervosa anorexia, hypothalamic amenorrhea, normal and pathological puberty	1
IV. THE PITUITARY GLAND Hypophysis morphology. Hypophysis physiology: physiological effects of the adenohypophysis hormones. Adenohypophysis disorders: Hypophysis tumors. Hyperfunctional adenohypophysis syndromes: Prolactinoma, Somatotroph adenoma: Acromegaly and Gigantism, Corticotrophin adenoma, Tireotroph adenoma. Gonadotroph adenoma	1
V. PITUITARY. Hypofunctional syndromes of the pituitary: Pituitary nanism. Adult hypophysis insufficiency. Hypophysis coma.	1
VI. THYROID. Thyroid Gland Morphology. Physiology of Gland Thyroid: Stages in the biosynthesis of thyroid hormones. Physiological effects of the thyroid hormones. Metabolism of thyroid hormones. Control of thyroid function. Pathology of thyroid gland.	1
VII. THYROID. Hyperthyroidism. Hypothyroidism	1
VIII. THYROID**.** Thyroiditis. Thyroid nodules and Thyroid cancer	1
IX. PARATHYROID GLANDS. Parathyroid glands morphology, physiology, Physiological effects of PTH (direct and indirect). Parathyroid gland disorders: Hyperparathyroidism, Hypoparathyroidism. OSTEOPOROSIS Factors in connection with the acceleration of bone turnover. Etiopathogenic classification. Diagnosis algorithm. Pathophysiological individualization of the therapy	1
X. CORTICOSUPRARENAL GLANDS. The corticosuprarenal glands morphology, physiology. The corticosuprarenal glands disorders: primary chronic corticosuprarenal failure, acute corticosuprarenal failure.	1
XI. CORTICOSUPRARENAL GLANDS. Corticosuprarenal hyperfunction. Hypercortizolism, Primary hyperaldosteronism, Adreno-genital syndrome.	1
XII. MEDULLOSUPRARENAL GLANDS Medullosuprarenal glands morphology, physiology. Medullar suprarenal glands disorders: Feocromocitoma OBESITY. Pathogenic mechanisms. Endocrine and visceral complications. Therapeutic attitude.	1
XIII. GONADS. Sexualization process stages. OVARY. Ovary morphology, physiology: Stages of biosynthesis of the ovary hormones, Physiological effects of the ovary hormones, Ovary disorders: Turner syndrome. Premature ovarian insufficiency syndrome. Female infertility of endocrine causes. Menopause.	1
XIV. GONADS. THE TESTES. Testes morphology, physiology. Testes disorders: Klinefelter's syndrome, Androgen resistances, Real hermaphroditism. Gynecomastia. Male Infertility of endocrine causes.	1

BIBLIOGRAPHY 1. Melmed S., Polonski K., Larsen R.P. ,Kronenberg H., Williams Textbook of Endocrinology, 13th Edition, W.B.Saunders, Philadelphia, (2016). 2. Poiană C., Fica S. (2015). Endocrinologie pentru studenți și rezidenți, Editura Universitară "Carol Davila", București 3.Grigorie D. Endocrinologie clinic,(2015). Ediția a-III-a, Editura Universitară "Carol Davila", București 4.Ghemigian A.(2015). -Endocrinologie-Note de curs pentru studenți- Editura Universitară "Carol Davila", București 5. Endocrinologie-Curs (2021), sub redacția Mihaela Popescu, Corina Lichiardopol, Editura Medicală Universitară, Craiova 6. Greenspan's Basic and Clinical Endocrinology (2017) David G. Gardner, Dolores M. Shoback	
8.2 Practical work (topics / themes)	
1. Presentation of the endocrinology clinical observation chart: particularities. Techniques of diagnosis investigation of the neurosecretor hypothalamic system: achievement and interpretation (means of hidrical restriction, test to ADH, test with TRH, etc). Case presentations (insipide diabetes, secondary amenorrhea etc).	2
2. Pituitary disorders. Techniques of diagnosis investigation (interpretation of radiography of normal and pathological empty sella, of a computerized tomography of the hypothalamic-hypophysis area, the appreciation of the visual field). Case presentations: acromegaly, galactorheea, other pituitary tumours.	2
3. Adenohypophysis disorders. Case presentations: general examination, demonstration of clinical and paraclinical diagnosis, medication and therapeutic techniques.	2
4. Adenohypophysis disorders. Case presentations of hypophysiary insufficiency. The interpretation of the morphograms and of the normal growth curve, of the carpian area radiography for bone age.	2
5. Thyroid disorders. Diagnosis investigation techniques (thyroid scintigram, ultrasonography, Achilles' reflexogram, samples of dynamic exploration). Case presentations.	2
6. Thyroid disorders. Case presentations: hyperthyroidism.	2
7. Thyroid disorders. Case presentations: hypothyroidism, thyroiditis, thyroid neoplasm. Test to TRH - interpretation.	2
8. Parathyroid disorders. Clinical aspects in tetania. Effectuation and interpretation of the EMG. Case presentations: primary hypoparathyroidism and hyperparathyroidism.	2
9. Corticosuprarenal disorders. Chronic corticosuprarenal insufficiency (case presentations, diagnosis and treatment demonstration). Test to CRH and/or AVP, test to metopyron, test to Synachten – interpretation.	2
10. Corticosuprarenal disorders: the disease and Cushing syndrome (case presentation, clinical manifestations, and therapy and diagnosis algorithm. Test of inhibition with dexametazone- interpretation.	2
11. Corticosuprarenal disorders: adreno-genital syndrome (clinical manifestations, exploration, therapy). Corticosuprarenal and medullosuprarenal disorders: case presentations: primary hyperaldosteronism and feocromocitoma.	2
12. Ovary disorders: investigation techniques (clomiphen test, LH-RH test – interpretation). Case presentations: Turner syndrome, virilisation syndromes.	2
13. Ovary disorders. Clinical case presentations: secondary amenorrhea, female infertility of endocrine causes. Cytohormonal exam - interpretation.	2
14. Testes disorders. Spermogram - interpretation. Case presentations: Klinefelter syndrome, hypogonadism hypogonadotroph, gynecomasty, infertility of endocrine causes.	2
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9. CORROBORATING THE DISCIPLINE CONTENT WITH THE EXPECTATIONS OF EPISTEMIC COMMUNITY REPRESENTATIVES, PROFESSIONAL ASSOCIATIONS AND EMPLOYEE REPRESENTATIVES RELATING TO THIS PROGRAM

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10. MHETODOLOGICAL LANDMARKS

Types of activity	Teaching Techniques / learning materials and resources: lecture, interactive group work, learning by problem solving / projects etc..

Course	The following combined methods are used: lecture, heuristic conversation, debate, problem solving In case of the occurrence of special situations (alert states, emergency states, other types of situations that limit the physical presence of people) the activity can also be carried out online using computer platforms approved by the faculty/university. The online education process will be adapted accordingly to ensure that all the objectives set out in the discipline sheet are met.
Practical work	The following combined methods are used: practical applications, problem solving, heuristic conversation
Individual study	-

11. RECOVERY PROGRAM

	No. absences that can recover	Place of deployment	Period	In charge	Scheduling of topics
Absences recoveries	3	Discipline's Venue/UMF halls/online	During the semester	Group assistant	Weekly
Schedule consultations / Students' Scientific Circle	Weekly / Weekly	Discipline's Venue/UMF halls/online	During the semester	Discipline holder	Weekly
Program for students poorly trained	Monthly	Discipline's Venue/UMF halls/online	During the semester	Discipline holder	Weekly

12. ASSESMENT

Activity	Types of assesment	Methods of evaluation	Percentage from final grade
Course	Formative assesment through essays, projects and surveys during the semester Summative assesment during the exam	Multiple Choice Questions Answering System (MCQ)/MCQ with the help of the IT platform in the online version.	70%
Practical work	Formative assesment through Multiple Choice Questions Answering System (MCQ) or/and descriptive, projects, survey during the semester. Periodic assesment during the semester Summative assesment during the exam	Multiple Choice Questions Answering System (MCQ) simultaneously with the one from the course / with the help of the video platform in the online version.	30%
Periodic checks	-	-	-
Attendance at the course	-	-	-
Minimum performance standard	At least 50% for each component of the evaluation		

13. GUIDANCE AND COUNSELLING PROGRAMS

Professional guidance and counselling programs (2 hours/monthly)

Scheduling the hours	Place of deployment	In charge
Last Friday of each month, 12.00-14.00	Clinic of Endocrinology/UMF halls/online	Discipline holder

Endorsement date in the department: 28.09.2022

Department Director,
Prof. Cristin VERE

Coordinator of study program,
Prof. Marius Eugen CIUREA

Discipline holder,
Assistant Professor Mihaela POPESCU