SUBJECT OUTLINE

1. Programme of study description

1.1.	**THE "CAROL DAVILA" UNIVERSITY OF MEDICINE AND PHARMACY**
1.2.	**THE FACULTY OF MEDICINE / THE CLINICAL DEPARTMENT**
1.3.	**DISCIPLINE: "C.I. Parhon" Endocrinology Discipline and SUUMC Clinical Base "Dr. Carol Davila"**
1.4.	**DOMAIN OF STUDY: Healthcare – regulated sector within the EU**
1.5.	**CYCLE OF STUDIES: BACHELOR'S DEGREE**
1.6.	**PROGRAMME OF STUDY: MEDICINE**

2. Subject description

2.1.	**Name of the subject/compulsory subject/elective subject within the discipline:Endocrinology**						
2.2.	**Location of the discipline:**						
2.3.	**Course tenured coordinator:**						
2.4.	**Practicals/clinical rotations tenured coordinator:**						
2.5. Year of study		**2.6. Semester**		**2.7. Type of assessment**		**2.8. Subject classification**	

3. Total estimated time (hours/semester of didactic activity) – teaching module

Number of hours per week	1st week: 25 2nd week:25 3rd week 20	**Out of which: course**	1st week: 10 2nd week:10 3rd week 8	**Clinical rotation**	1st week: 15 2nd week:15 3rd week 12
Total number of hours from curriculum	**70 hrs**	**Out of which: course**	**28 hrs**	**Clinical rotation**	**42 hrs**
Distribution of allotted time	**3 weeks**		**5hrs/day**		**Hours**
Study from textbooks, courses, bibliography, and student notes					1. Endocrinology for students and registrars, editors Prof.dr Catalina Poiana, prof dr. Simona Fica, carol Davila Univ. publisher, 2015 2. Harrison's Endocrinology, 4th edition, editor J Larry Jameson, Mc Graw hill 2017 3. Oxford handbook of endocrinology and diabetes 2009, HE Turner, JAH Wass 4. Problems of diagnosis and treatment in endocrinological practice. Editor S. Fica, Medical Publishing House, 2006 5. Clinical Endocrinology, Editor D Grigorie, carol Davila Univ Publisher, 2008
Additional library study, study on specialized online platforms and field study					YES
Preparing seminars / laboratories, assignments, reports, portfolios and essays					
Tutoring					
Examinations					Periodically during clinical practice
Other activities					Involving students in clinical research activity of the

		department
Total hours of individual study		
Number of credit points		5

4. Prerequisites (where applicable)

4.1. of curriculum	Not applicable
4.2. of competencies	Not applicable

5. Requirements (where applicable)

5.1. for delivering the course	The amphitheater of the "C.I. Parhon" National Institute of Endocrinology
5.2. for delivering the clinical rotation	Clinical departments of Endocrinology in the "C.I. Parhon" National Institute of Endocrinology

6. Acquired specific competencies

Professional competencies (expressed through knowledge and skills)	Thorough knowledge regarding the etiology, pathogenesis, and ohysiopathology of endocrine diseases Fundamental notions regarding the paraclinical evaluation methodology used in endocrinological diagnosis (laboratory tests, hormonal evaluations both basal and during dynamic tests, genetical, pathological and immunohistochemical diagnosis, imagistic evaluations) Basic knowledge regarding the action emchanisms of drugs, the indications, contraindications and adverse effects of various therapeutical resources used in endocrinological practice The ability to establish the positive and differential diagnosis in endocrine diseases
Transversal competencies (of role, of professional and personal development)	Identifying the roles and responsibilities in a multidisciplinary team, applying techniques of relationing and efficient team work The bility to use medical language specific to endocrinological pathology, both in the relation with patients and colleagues Efficient use of the informational sources and resources of communication and assisted professional formation (internet portals, speciality software applications, databases, online courses) booth in Romanian and in a language with international circulation

7. Subject learning objectives (based on the scale of acquired specific competencies)

7.1. General learning objective	Identifying disease states, the degree of emergency, as well as establishing the correct diaggnosis of endocrine diseases
7.2. Specific learning objectives	Cultivation of medical and good medical practice principles in endocrinology Establishing a good and efficient communication relationship between

	doctor and patient with endocrine pathology, developing the doctor-patient and doctor- patient next-of-kin interrelationship,

8. Content

8.1. Course	**Teaching methods**	**Observations**
Course 1 The endocrine system, the endocrine glands-introductive notions		
Course 2 neuroendocrinology- the neurosecretory activity of the hypothalamic-pituitary system	Courses are teached in course room with special technical equipment. All courses have an electronic support and the informations are updated based on speciality journals, manuals and books edited by the university staff of our discipline	28 hrs
Course 3 Anterior pituitary		
Course 4 Adult hypopituitarism		
Course 5 Endocrine causes of growth and development disorders		
Course 6 Thyroid gland		
Course 7 Endemic goiter and iodine deficiency. Thyroid nodule. Thyroiditis		
Course 8 Parathyroid glands		
Course 9 The adrenal cortex		
Course 10. The adrenal medulla. Endocrine hypertension		
Course 11. Normal and pathological sexualisation		
Course 12. The ovary		
Course 13 the testicle. Endocrine infertility		
Course 14. Obesity and metabolic syndrome		

8.2. Clinical rotation		**Teaching methods**	**Observations**
CR 1 CR 2 CR3 CR4 CR5 CR6 CR7 CR8 CR9 CR10 CR11 CR12 CR13 CR14	Hypothalamus diseases: insipidus diabetes, craniopharyngioma, Pituitary diseases:functioning and non-functioning pituitary adenomas, Growth disorders Thyroid disorders: thyrotoxicosis, hypothyroidism, thyroiditis, thyroid cancer Paratyroid disorders:Hypo- and hyperparathyroidism; endocrine osteoporosis Adrenal medulla disorders: pheochromocytoma Adrenal cortex disorders: hypercorticism, adrenal insufficency, adrenal tumors, hyperladosteronism Ovarian diseases Testicular disorders Endocrine infertility	Th CR will take place as paients [resentations by the university staff (demonstrations) and examinations of the patinets by students in the clinic. The aim is for each student to become ble to examine and endocrine patient, to write the specific file of the patient, to recommend a treatment and to know the evolution of the patient. During CR will be applied in clinic the knowledge about endocrine patient neede for a general practitioner, according to the notions presented at course. See annex nr 2	42 hrs

9. Corroboration of the subject content with the expectations of the representatives of the epistemic community, professional associations, and major employers in the field of the programme of study

The accumulation of professional knowledge by the student year V, discipline of Endocrinology "C. I. Parhon" Institute follows 3 main targets: the correct diagnosis and treatment prescription for the endocrine patient; establishing an efficient relationship with the patient and preparing the future doctor for a good interrelation with the employer

10. Assessment

Type of activity	**Assessment criteria** **Presence and activity at CR, case presentations and medical problems**	**Assessment methods** **EXAMINATION**	**Assessment weighting within the final grade** **Practical exam 20%** **Oral exam: 30%** **Grid test: 50%**
Course		**Grid test**	
Clinical rotation		**Practical exam** **Oral exam**	

Minimum performance standard: 5 grade
Minima criteria grade 5: identifying the secretory products of endocrine glands and their acrions Clinical presentation of endocrine diseases needed for screening tests Specifical examination manouevers

Date of filing	**Signature of the course tenured coordinator**	**Signature of the seminar tenured coordinator**
17.10.2022		

Annex nr 1

ENDOCRINOLOGY
THE ANNALYTICAL PROGRAMME OF THE COURSE
1ST MODULE (28 HRS)

Course themes

1. The endocrine system, endocrine glands- introductive notions
Hormones, structure, transport, metabolism, mechanism of action
Endocrine receptors: structure, regulation
Endocrine regulation systems

2. Neuroendocrinology- neurosecretions of the hypothalamo-pituitary system
Hypothalamus- anatomy, physiology
Hypothalamic pathology: diabetes insipidus, inappropriate ADH secretion syndrome, pituitary isolation syndrome, craniopharyngioma

3. Anterior pituitary
Anatomy, hormonology (structure, mechanism of action, regulation)
Functioning and non-functioning pituitary adenomas: classification
Pituitary tumor syndrome
Diagnosis
Treatment

4. Adult hypopituitarism
Classification, diagnosis, treatment
Empty sella syndrome

5. Endocrine causes of growth and developmental disorders
Classification
Diagnosis
Treatment

6. Thyroid
Anatomy, hormonology, biosynthesis, mode of action, regulation
Thyroid hyperfunction, thyrotoxixoses: classification, etiopathogenesis, clinical semiology, diagnosis, treatment
Graves-Basedow disease, toxic multinodular goiter, toxic adenoma
Thyrotoxic crisis
Thyroid hypofunction: classification, etiopathogenesis, clinic, diagnosis, treatment
Myxedematous coma

7. Endemic goiter and iodine deficiency. Thyroid nodule. Thyroiditis.
Iodine deficiency disorders diagnosis, symptoms, treatment
Diagnostic algorithm of thyroid nodule
Differentiated thyroid cancer, medullary and anaplastic thyroid cancer
Acute, subacute and chronic thyroiditis

8. Parathyroids
Anatomy, physiology
Phosphocalcic homeostasis (vitamin D, parathormone, calcitonin)

Parathyroid hypofunction: tetany
Parathyroid hyperfunction: primary and secondary hyperparathyroidism
Endocrine osteoporosis:classification, diagnosis, treatment

9. Adrenal cortex
Anatomy, hormonology: biosynthesis, action, regulation
Cushing syndrome:classification, etiopathogenesis, clinic, diagnosis, treatment
Congrenital adrenal hyperplasia: clinical forms, diagnosis, treatment
Primary hyperaldosteronism
Chronic (Addison disease) and acute primary adrenal insufficiency

10. Adrenal medulla. Endocrine arterial hypertension
Adrenal medulla- anatomy and physiology
Pheochromocytoma- clinic, diagnosis and treatment
Multiple endocrine neoplasia syndromes
Neuroendocrine tumors- generalities
Secondary endocrine hypertension: clinical, diagnostic and therapeutical particularities

11. Normal and pathological sexualization process
Sexualization phases
Normal and pathological puberty
Menopause

12. Ovary
Anatomy, hormonology
Gonadal pathology: ovarian insufficiency
Turner syndrome
Polycystic ovaries syndrome. Hirsutism

13. Testes. Endocrine infertility
Anatomy, hormonology
Testicular pathology: testicular insufficiency
Klinefelter syndrome
Endocrine infertility:diagnosis and treatment

14. Obesity and metabolic syndrome
Etiopathogenesis
Diagnosis
Complications, comorbidities, treatment

Bibliography course
1. Endocrinology for students and registrars, edited by prof Catalina Poiana, prof Simona Fica, Carol Davila univ. Publishing house, 2015
2. Harisson's endocrinology, 4th edition. Editor J Larry Jameson, Mc Graw Hill, 2017
3. Oxford handbook of endocrinology and diabetes, 2009, HE Turner, JAH Wass
4. Clinical endocrinology edited by D Grigorie, 2008, Carol Davila univ. Publishing house

Annex nr 2
ENDOCRINOLOGY
THE ANNALYTICAL PROGRAMME OF THE CLINICAL ROTATION
1ST MODULE (42 HRS)

CLINICAL ROTATION

Hypothalamus and pituitary diseases
Diabetes insipidus (clinical forms)
Innapropriate vassopresin secretion
Pituitary tumor syndrome
Functioning and non-functioning pituitary tumors
Short stature of pituitary cause
Panhypopituitarism
Empty sella syndrome
Pituitary isolation syndrome
Craniopharyngioma

Thyroid diseases
Endemic goiter
Non-toxic nodular goiter (solitary nodule, polinodular goiter)
Graves-Basedow disease
Toxic thyroid adenoma, toxic nodular goites
Thyrotoxic crisis
Congenital myxedema
Adult myxedema (autoimmune, postthyroidectomy, postradioiodine treatment)
Myxedematous coma
Acute, subacute and chronic thyroiditis
Thyroid cancer

Parathyroid diseases
Hypoparathyroidism
Primary and secondary hyperparathyroidism
Endocrine osteoporosis

Adrenal medulla disorders
Pheochromocytoma

Adrenal cortex disorders
Chronic primary adrenal insufficiency (Addison disease)
Cushing syndrome and disease (hypercortisolism syndrome)
Congenital adrenal hyperplasia
Adrenal cortex tumor syndrome
Primary hyperaldosteronism

Ovarian diseases
Normal and pathological feminine puberty
Intersexuality
Polycystic ovary syndrome
Primary and secondary amenorrhoea
Feminine infertility
Menopause

Testicular disorders
Intersexuality
Normal and pathological male puberty
Cryptorchidism, gynecomastia
Adult testicular insufficiency
Erectile dysfunction syndromes
Male infertility

Bibliography clinical rotation
1. Endocrinology for students and registrars, edited by prof Catalina Poiana, prof Simona Fica, Carol Davila univ. Publishing house, 2015
2. Harisson's endocrinology, 4th edition. Editor J Larry Jameson, Mc Graw Hill, 2017
3. Oxford handbook of endocrinology and diabetes, 2009, HE Turner, JAH Wass
4. Diagnosis and treatment problems in endocrinological practice, edited by S Fica, Medical Publishing house, 2006
5. Clinical endocrinology edited by D Grigorie, 2008, Carol Davila univ. Publishing house