IV year **A.Y. 2025-26**	Scientific Field	**SYSTEMIC PATHOLOGY II**	TUTOR	ECTS
	MED/12	Gastroenterology	L. Baiocchi	1
	MED/12	Gastroenterology	L. Biancone	1
	MED/12	Gastroenterology	E. Calabrese	1
	MED/13	Endocrinology and Medical Sexology (ENDOSEX)	A. Sansone	1
	MED/24	Urology	S. Germani	1
Emmanuele A. Jannini **COORDINATOR**	MED/13	Endocrinology and Medical Sexology (ENDOSEX)	E. A. Jannini	1
	MED/13	Endocrinology and Medical Sexology (ENDOSEX)	D. Lauro	1
	MED/14	Nephrology	S. Manca	1
	MED/14	Nephrology	M.P. Mitterhofer	1
	MED/18	General Surgery	T.M. Manzia	1
	MED/24	Urology	R. Miano	1
	MED/49	Applied technical dietary sciences	D. Della Morte Canosci	1
			TOT	12

SPECIFIC AIMS	To achieve a systematic knowledge of the most relevant diseases affecting the different systems, from the nosographic, etiological, pathophysiological and clinical point of view, in the context of a unified and global vision of human pathology. To acquire the ability to critically evaluate and correlate clinical symptoms, physical signs and functional abnormalities with anatomo-pathological lesions. GENERAL OBJECTIVES: A) Knowledge of the nosographic framework and the clinical presentation B) Knowledge of the essential pathogenetic steps C) Knowledge of the natural history of the disease and major complications D) Ability to diagnose the individual pathological conditions E) Knowledge of the principles of pathophysiologic and therapy F) Ability to provide first-level medical assistance G) Ability to perform common medications H) Ability to critically read a scientific paper and understand the basic principles to plan a clinical research protocol.

PROGRAM GASTROENTEROLOGY & HEPATOLOGY	Pathophysiologic; clinical and etiological classification, the key pathogenetic steps, clinical presentations and complications of individual diseases. Understanding the diagnostic procedures of the following diseases: autoimmune and viral chronic hepatitis, alcohol–induced liver damage, non-alcoholic-fatty-liver disease (NAFLD), hemochromatosis, Wilson disease, liver cirrhosis, hepatocellular carcinoma (HCC), gallstone disease, acute and chronic cholestasis, acute and chronic pancreatitis, acid-related upper GI tract diseases, drug-induced gastric disease, functional diseases of the GI tract, diverticular disease, celiac disease and malabsorption syndromes, pre-neoplastic and neoplastic diseases of GI tract, and inflammatory bowel diseases.
TOPICS	Autoimmune and viral chronic hepatitis, alcohol–induced liver damage, non-alcoholic-fatty-liver disease (NAFLD), hemochromatosis, Wilson disease, liver cirrhosis, hepatocellular carcinoma (HCC), gallstone disease, acute and chronic cholestasis, acute and chronic pancreatitis, acid-related upper GI tract diseases, drug-induced gastric disease, functional diseases of the GI tract, diverticular disease, celiac disease and malabsorption syndromes, pre-neoplastic and neoplastic diseases of GI tract, inflammatory bowel diseases.

PROGRAM ENDOCRINOLOGY& MEDICAL SEXOLOGY (ENDOSEX)	In agreement with the Educational goals (G.U. No. 155 of July 9, 2007 - DM 16 March 2007) of the Courses in medicine and surgery - LM-41, at the end of the course to student shall have acquired:”the knowledge of the pathophysiological, clinical and psychological aspects of (…) sexuality and its dysfunctions in terms of medical sexology”, and the ability to recognize and manage the major endocrine and metabolic diseases, identifying the conditions that need the professional specialist.
TOPICS	Biology of seduction and copulation. Sexual orientation, gender identity, abnormalities of sexual differentiations and transsexualism. Gender endocrinology and the basis of gender medicine. Female sexual dysfunction (HSDD, vaginismus, dyspareunia, anorgasmia, PGAD). Male sexual dysfunction (HSDD, erectile dysfunction, premature/delayed/retrograde ejaculation). Paraphilic disorders. Contraception and STD prevention.Hypogonadism, gonadal diseases, infertility, and endocrine and metabolic diseases in pregnancy. Endocrinology of gender-specific medicine and gender-specific differences of endocrine and metabolic diseases. Psychoneuroendocrinology, disorders of the hypothalamus and pituitary (stress, puberty, growth, lactation, etc). Thyroid pathology (hypo and hyperthyroidisms, goiter, thyroiditis, cancer). Neurohypophysis (diabetes insipidus, SIADH),

	calciotropic hormones and bone metabolism Adrenal diseases (Addison, Cushing, CAI). Autoimmune endocrine diseases, MEN, neuroendocrine tumors, endocrine hypertension. Thinness, metabolic syndrome, and obesity. Hypoglycemic disorders, diabetes. Other metabolic disorders (dyslipidemias, gut, aminoacidic disorders).
PROGRAM UROLOGY	To reach specific knowledge of the pathophysiologic and the clinical pictures of the main urological diseases. To overview the most updated surgical and medical urological therapies. To learn how to approach the urological patients and perform basic outpatient procedures.
TOPICS	Anatomy of the genitourinary tract. Diagnosis and management of urinary tract infection and sexually transmitted diseases, including cystitis, epididymitis, prostatitis, and uretritis. Diagnosis and management of haematuria. Testicular torsion. PSA screening. BPH. Diagnosis/staging/management of prostate cancer. Diagnosis/staging/management of bladder and upper urinary tract cancer. Diagnosis/staging/management of testicular cancer. Diagnosis/staging/management of renal cancer. Urologic trauma. Phymosis and paraphimosis. Vesicoureteral reflux. Hypospadias. Undescended testis. Hydrocele. Male infertility. Varicocele. Diagnosis and management of urinary incontinence. Diagnosis and management of impotence. Diagnosis and management of renal, ureteric, and bladder calculi. Clinical practice: Medical history tacking in Urology. Physical examination in Urology, including DRE. Testicular examination. Insertion of urethral catheter. Carry out and interpret urine analysis. Interpretation of: plain radiograph of kidney; ureter and bladder ; urinary flow rate; CT of abdomen and pelvis; ultrasonography of the kidney, ureters and bladder; semen analysis.
PROGRAM NEPHROLOGY	Basic knowledge of main renal glomerular, tubular, interstitial and vascular diseases. Fluid, electrolyte and acid/base balance. Diagnosis of chronic renal failure and indication to renal replacement therapy. Complications of chronic kidney disease.
TOPICS	Clinical semeiology, laboratory findings and imaging in nephrology. Pathophysiologic of fluid, electrolyte and acid/base balance. Nephritic and nephrotic syndromes. Primary glomerular nephropathies. Tubulo-interstitial nephropathies. Vascular nephropathies. Cystic kidney diseases. Acute and chronic renal failure, complications of chronic kidney disease.

	Renal replacement therapies.

PROGRAM GENERAL SURGERY	Introduction to surgery. Knowing of the general criteria: pre-operative assessment of patients and major postoperative complications; Principles of clinical diagnostics, principles of diagnostic imaging; shock and general surgery techniques; the treatment of surgical wounds; anatomical and pathophysiological bases of the pathology of the abdominal wall; General information on liver transplantation, kidney, pancreas.
TOPICS	Preoperative evaluation of the surgical patients; Principles of clinical diagnostics, principles of diagnostic imaging. Post-operative complications. Inguinal hernia, umbilical hernia, incisional hernia, hemorrhagic shock, acute abdomen. Benign and malignant tumors of the liver and biliary tract(etiology, signs and symptoms, diagnosis and treatment). Benign and malignant tumors of the pancreas (etiology, signs and symptoms, diagnosis and treatment). Gallbladder and bile duct stones (etiology, signs and symptoms, diagnosis and treatment). Acute and chronic pancreatitis (etiology, signs and symptoms, diagnosis, and treatment). Liver transplantation (indications, surgical techniques, complications). Kidney transplantation (indications, surgical techniques, complications). Principles of pancreas transplantation.
PROGRAM APPLIED TECHNIQUES IN DIETARY SCIENCES	To know the techniques and methods of semiotics and to define the state of health and risk of disease, according to the nutritional status. To know the indicators of nutritional risk predictors of disease. To know the role of diet in the prevention of chronic degenerative diseases. To know the principles of artificial nutrition: enteral and parenteral nutrition. To know the principles of nutrigenetics and nutrigenomics.
TOPICS	Assessment of nutritional status and energy requirements. Principles of diet therapy. Nutrition and non-communicable diseases. Principles of nutritional genomics.

TEXTBOOKS	Gastroenterology&Hepatology: Harrison's “Principles of Internal Medicine”. Endocrinology& Med Sexology: from the Merk Manual, professional edition (free download). For each, see related links: http://www.merckmanuals.com/professional/endocrine-and-metabolic-disorders http://www.merckmanuals.com/professional/psychiatric-disorders/sexuality-gender-dysphoria-and-paraphilias/overview-of-sexual-behavior http://www.merckmanuals.com/professional/psychiatric-disorders/sexuality-gender-dysphoria-and-paraphilias/gender-dysphoria-and-transsexualism http://www.merckmanuals.com/professional/genitourinary-disorders/male-sexual-dysfunction/overview-of- male-sexual-function http://www.merckmanuals.com/professional/gynecology-and-obstetrics/sexual-dysfunction-in-

	women/overview-of-female-sexual-function-and-dysfunction OTHERS: Whitehead S, Miell J: Clinical Endocrinology; Goodman HM Basic Medical Endocrinology, 4th Edition; Melmed S, Polonsky KS, Reed Larsen P, Kronenberg HM (eds) Williams Textbook of Endocrinology, 13th Edition; Jameson J: Harrison's Endocrinology, 3rd Edition Porst H, Reisman Y The ESSM syllabus of sexual medicine. Diet Sci Tech: Didactic material will be provide to the student. Nephrology: Harrison's "Principles of Internal Medicine" (Mother book). Harrison's "Nephrology" and "Acid Base Disorder". Urology: Smith and Tanago's General Urology, Jack. W. McAninch, Tom. F. Lue, Editors; Eighteenth Edition, McGraw Hill – ISBN 978-0-07-163260-7. General Surgery: Class Notes (Slides and notes collected during classrooms). Text Book of Surgery, XIX edition, Author: Sabiston, Editor: Elsevier-Saunders
EXAM METHOD	Oral exam takes place in every session scheduled by the CCL. The exam Commission is normally composed of one lecturer for each main subject area present in the Integrated Course. There are no practical exams.

EXAM COMMISSION	The Coordinator, full Professors of the disciplines, Professors of similar disciplines, Specialists of the subject, compose the exam Commission of the Integrated Course.

L. Baiocchi	Member
L. Biancone	Member
E. Calabrese	Member
D. Della Morte Canosci	Member
S. Germani	Member
E. A. Jannini	President

D. Lauro	Member
S. Manca	Member
T.M. Manzia	Member
R. Miano	Member
M.P. Mitterhofer	Member

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PREREQUISITES: Previous knowledge and competence in the following subjects: Human Anatomy1, Human Anatomy 2, Histology and Embryology, Biochemistry and Molecular Biology, Immunology and Immunopathology, Physiology and Pathophysiology, General Pathology.

The specific learning outcomes of the program are coherent with the general provisions of the Bologna Process and the specific provisions of EC Directive 2005/36/EC. They lie within the European Qualifications Framework (Dublin Descriptors) as follows:

1. **Knowledge and Understanding**

- Assess the physiologic principles which govern the function of the gastrointestinal and endocrine systems and the alterations induced by functional and structural abnormalities.
- Highlight the main aspects of disorders focusing on the etio-pathogenesis, diagnosis and therapy.
- Assess the mechanism of action and regulation of each hormone while understanding their role in the whole system.
- Understand the core principles of dietary and metabolic disorders. Categorize the patients based on risk factors, pathogenesis and possible dietary intervention.
- Determine the major indications or contraindications for both medical and surgical therapeutic strategies focusing on the main procedural steps to be undertaken.
- Identify the incidence and epidemiology of benign and malignant disorders in order to understand their impact in the general population.
- Analyze a clinical case and provide an exhaustive explanation of the possible diagnostic hypothesis and appropriate therapeutic approaches.

2. **Applying Knowledge and Understanding**

- Apply the theoretical knowledge to the clinical setting, being able to recognize the general diagnostic aspects of diseases.
- Evaluate the patient, emphasizing the findings obtained from the history, physical examination, and instrumental tests. If the mechanisms underlying these findings can be identified, the correct etiologic, anatomic, and physiologic diagnoses can usually be deduced.
- Predict a differential diagnosis based on given clinical data and provide a suitable explanation of the underlying reasonings.
- Evaluate the metabolic assesment and dietary pattern of specific conditions and provide possible dietary alternatives.
- Learn to interpret appropriate laboratory and diagnostic studies.
- Learn the practical aspects of the investigation tests and how to perform them.

3. **Making Judgements**

- Recognize the importance of an in-depth knowledge of the topics consistent with a proper medical education.
- Identify the benefits and adverse effects of any diagnostic and therapeutic intervention.

4. **Communication Skills**

- Present the topics orally in an organized and consistent manner.
- Use of proper scientific language coherent with the topic of discussion.

5. **Learning Skills**

- Identify the possible use of the acknowledged skills in the future career.
- Assess the importance of the acquired knowledge in the overall medical education process.