

السيد رئيس لجنة الرصانة المحترم

م/ محضر اجتماع اللجنة العلمية في فرع العلوم المختبرية السريرية

تحية طيبة

اجتمعت اللجنة العلمية لفرع العلوم المختبرية السريرية في يوم الاحد الموافق 2025-9-28 وناقشت المفردات المطلوبة لامتحان الرصانة العلمية للطلبة الحاصلين على شهادات عليا من جامعات غير مدرجة في الادلة المعتمدة من قبل وزارة التعليم العالي والبحث العلمي وقررت تحديد المواد التالية مع مصادرها لحملة شهادة الماجستير والدكتوراه .

1. حملة شهادة الماجستير

	Subject Name	Chapters	References
1	Advanced Biochemistry II	Overview of Metabolism and the Provision of Metabolic Fuels, Glycolysis and the Oxidation of Pyruvate, The Citric Acid Cycle, The Respiratory Chain and Oxidative Phosphorylation, Metabolism of Glycogen, Gluconeogenesis and the Control of Blood Glucose, The Pentose Phosphate Pathway, Biosynthesis of the Nutritionally Nonessential Amino Acids, Catabolism of Proteins and of Amino Acid Nitrogen, Catabolism of the Carbon Skeletons of Amino Acids, Conversion of Amino Acids to Specialized Products, Oxidation of Fatty Acids, Biosynthesis of Fatty Acids and Eicosanoids, Lipid Transport and Storage, Cholesterol Synthesis, Transport, and Excretion	Harpers Illustrated Biochemistry; Latest edition
2	Advanced Clinical Biochemistry II (مشارك مع ص سريرية)	Carbohydrate Metabolism & related disorder. Dyslipidemia, Liver function tests, The kidney function tests, Plasma enzymes in diagnosis (clinical enzymology), Endocrine system and lab diagnosis techniques, Hypothalamus and pituitary glands with their diseases, Adrenal gland, Thyroid gland, Male and female reproductive glands & related diseases	Clinical Biochemistry and Metabolic Medicine by Martin A. Crook; Latest edition
3	Diagnostic Microbiology	Pathogenesis of microbial Infection, Genetics: molecular techniques in genetics, Skin infections, CNS infection, Respiratory tract infection (upper and lower RTI), GIT infection, Sexually transmitted infection, Bone and joint infection, Industrial pharmaceutical microbiology.	A Textbook of Pharmaceutical Microbiology For Pharmacy, Medical Sciences, and Life Sciences. 2022.

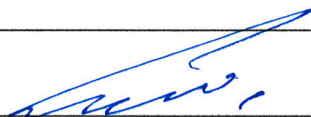
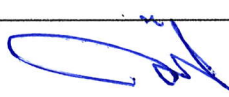
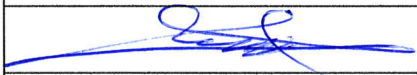
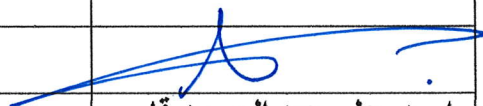
4	Pathophysiology II مشارك مع الفارما والسريرية	General Introduction, Etiology & cell injury, Pathophysiology of cardiovascular System, Pathophysiology of hematological Diseases, Pathophysiology of the respiratory system, Pathophysiology & diseases of the Digestive System , Pathophysiology of autoimmunity, Pathophysiology & diseases of the neuroendocrine system, Pathophysiology of urinary system, Pathophysiology of the male& female reproductive System, Pathophysiology of locomotors system	Pathophysiology: The Biologic Basis for disease in adults and children (8th Ed.); 2018. Advanced health assessment & clinical diagnosis in primary care (5th Ed.); 2015.
5	Molecular Pathophysiology مشارك مع الفارما والسريرية	General molecular basis of diseases, Molecular basis of cell injury, Molecular basis of Neuroendocrine disorders in the pathophysiology of diseases, Molecular pathophysiology of disorders of humoral signaling& gain/loss in function feedback defects, Molecular basis of ion channels and selective transport defects in the pathophysiology of digestive, cardiovascular & urinary systems diseases, Molecular basis of oxidoreductive Stresses mediated diseases, Molecular basis of oncogenesis	Basic Concepts of Molecular Pathology Series: Molecular Pathology Library. The Molecular Basis of Human Disease, 2nd ed.
6	Molecular Pharmacology (مشارك مع الفارما)		
7	Advanced Clinical Immunology II	Introduction to Clinical Immunology, Immune responses, Complement system, Antigens and the major histocompatibility complex, Antibodies, Hypersensitivity, Tissue transplantation, Tumor immunity, Autoimmunity, Immunodeficiency, Laboratory immunological examination methods	Kuby Immunology Eighth Edition, 2019. Roitt's Essential Immunology, 13th Edition, 2017.
8	Research Methodology in Clinical Biochemistry I	Introduction to Research in Clinical Chemistry, Research Design, Literature Review, Sampling Techniques, Data Collection Methods, Ethical Considerations in Research, Data Interpretation and Presentation, Writing a Research Proposal, Critical Appraisal of Research, Writing Research Papers, Qualitative Research Methods, Systematic Reviews and Meta-Analysis, Laboratory Research Methodology, Future Trends in Clinical Chemistry Research, Course Review and Final Project Presentations.	Research Methodology for Allied Health Professionals: A comprehensive guide to Thesis & Dissertation by Animesh Hazari

2. حملة شهادة الدكتوراه

	Subject Name	Chapters	References
1	Advanced Clinical Biochemistry III مشترك مع الفارما والسريرية	In born error of metabolism, Oxidative stress, Oxidative stress in diabetes, Glycation reactions & Pathogenesis of diabetes complications, Dyslipidemia, Trace Elements, Introduction to hormone behavior, Hypothalamic hormones, The pituitary gland, The adrenal gland, The thyroid gland, The male and female reproductive glands, Plasma and urine protein, Tumor Markers	Tietz Clinical chemistry& Molecular Diagnostics 7th edition Clinical Chemistry & Metabolic Medicine, 8th edition
2	Advanced Clinical Biochemistry IV	Bone metabolism, Bone Diseases, Cancer, Obesity, Acid –Base Disorders, Nutrition, Cardiovascular diseases, Potassium metabolism, Blood and hem diseases, Porphyria, Chronic Kidney Diseases	Tietz Clinical chemistry& Molecular Diagnostics 7th edition Clinical Chemistry & Metabolic Medicine, 8th edition
3	Ad Therapeutics III (مشترك مع ص سريرية)		
4	Advanced Pharmaceutical Biotechnology	Introduction to Techniques of molecular biology in biotechnology, Main techniques applied in medicine & pharmaceutical products, DNA Sequencing, Gel Electrophoresis, Probes, Cloning of DNA, Polymerase chain reaction (PCR), Detection of polymorphisms, DNA chips, CRISPER-Gas 9 system in gene editing, Vaccines, GH, Insulin, other complex human proteins, How to avoid passing defective genes to offspring, Utilizing animals in production of human important proteins in significant amounts.	Genes and Common Diseases- Genetics in modern medicine. Molecular Diagnosis of Genetic Disease.
5	Ad Pharmacology III (مشترك فارما)		
6	Pathophysiology III	Pathophysiology of liver, soft tissue tumor ,pathophysiology of autoimmune diseases ,pathophysiology of heart failure, Pathophysiology of hypersensitivity ,inflammation ,neoplasia pathophysiology.	The Biologic Basis for Disease in Adults And Children by :Kathryn L. McCance, Sue E. Huether

7	Advanced Clinical Immunology III	Introduction to immunology, Genetic regulation of non-specific immunity, Cellular components of the immune system, Cellular components of the immune system, Molecular components of the immune system, Specific cell receptors, Specific immune system, Immunoglobulins , Hypersensitivity reaction , Molecular basis of tumor, Autoimmune diseases	Roitt's Essential Immunology, 13th Edition. Cellular and Molecular Immunology 10th Edition.
8	Applied Molecular Technology	Lab Safety and Equipment Familiarization, Electrophoresis, Enzyme-Linked Immunosorbent Assay (ELISA), Nucleic Acid Extraction (RNA), Nucleic Acid Extraction (DNA), Polymerase Chain Reaction (PCR), Real-Time PCR, Reverse Transcription-PCR (RT-PCR), DNA Sequencing, Restriction Fragment Length Polymorphism (RFLP), Western Blotting, Cell line technique, Immuno-histochemical techniques.	Tietz Textbook of Clinical Chemistry and Molecular Diagnostics by Nader Rifai Molecular Diagnostics: Fundamentals, Methods, and Clinical Applications by Lela Buckingham
9	Enzymology	Introduction to Enzymology, Enzyme Structure-Function Relationships, Enzyme Kinetics, Advanced Kinetics and Allosteric Regulation, Enzyme Inhibition, Enzymes in Metabolic Pathways, Diagnostic Enzymology, Enzymes as Therapeutic Agents, Enzyme Engineering and Biotechnology, CRISPR and Enzymes in Gene Editing, Future Directions in Enzymology.	How Enzymes Work: From Structure to Function by Haruo Suzuki ENZYMES: Biochemistry, Biotechnology and Clinical Chemistry by Trevor Palmer and Philip L. Bonner ENZYMES: Catalysis, Kinetics and Mechanisms by N. S. Punekar
10	Research Methodology in Clinical Biochemistry II	Introduction to Advanced Research Methodologies, Designing Complex Experiments, Writing a Research Proposal , Literature Review and Gap Identification, Scientific Integrity and Ethical Research Practices, Data Collection and Management in Clinical	Research Methodology in Bioscience and Biotechnology by Kian Mau

	Chemistry, Statistical Analysis and Interpretation, Writing High-Impact Scientific Papers, Navigating the Publication Process, Research Integrity and Peer Review Ethics, Societal Impact and Responsible Research, Preparing Systematic Reviews and Meta-Analyses, Innovation and Future Directions in Clinical Chemistry Research, Research Dissemination and Public Engagement	Goh Research Methodology for Allied Health Professionals: A comprehensive guide to Thesis & Dissertation by Animesh Hazari
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اللجنة العلمية في فرع العلوم المختبرية السريرية		
		
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