

TOKAT GAZİOSMANPAŞA UNIVERSITY
TOKAT HEALTH CARE SERVICES VOCATIONAL SCHOOL
DEPARTMENT OF MEDICAL SERVICES AND TECHNIQUES
PATHOLOGY LABORATORY TECHNIQUES PROGRAM
(4-SEMESTER COURSE PLAN)

1st Semester (Fall Semester) Course Plan

Course Code	Course Title	C/E	Theory	Practice	ECTS
ALT101	Atatürk's Principles and History of Turkish Revolution I	Compulsory	2	0	2
TD101	Turkish Language I	Compulsory	2	0	2
ING101	English I	Compulsory	2	0	2
PLT119	General Chemistry	Compulsory	2	0	4
PLT121	Histology	Compulsory	2	0	4
FLZ101	Physiology	Compulsory	2	0	3
ANA101	Anatomy	Compulsory	2	0	3
PLT109	Cytology	Compulsory	2	0	3
ENF100	Information Technologies and Office Software	Compulsory	2	0	3
SEÇ102	University Elective Course (Our Values)	Elective	2	0	2
PLT123	Medical Terminology	Compulsory	2	0	2
	TOTAL		22	0	30

2nd Semester (Spring Semester) Course Plan

Course Code	Course Title	C/E	Theory	Practice	ECTS
TD102	Turkish Language II	Compulsory	2	0	2
YBD102	Foreign Language I	Compulsory	2	0	2
ATA102	Atatürk's Principles and History of Turkish Revolution II	Compulsory	2	0	2
KRY102	Career Planning	Compulsory	1	0	2
MIK101	Microbiology	Compulsory	2	0	3
PLT120	Biochemistry	Compulsory	2	0	3
PLT124	Histotechnology I	Compulsory	2	1	5
PLT130	Pathology	Compulsory	2	0	4
PLT128	Laboratory Safety	Compulsory	2	0	3
PLT126	Macroscopic Dissection	Compulsory	2	0	4
	TOTAL		17	1	30

3rd Semester (Fall Semester) Course Plan

Course Code	Course Title	C/E	Theory	Practice	ECTS
PLT205	Cytotechnology	Compulsory	3	0	5
PLT203	Histotechnology II	Compulsory	2	1	5
PLT213	Pathology Laboratory Techniques Practice I	Compulsory	0	12	14
İLK203	First Aid	Compulsory	1	1	3
ENF201	Infectious Diseases	Compulsory	2	0	3
	TOTAL		8	14	30

4th Semester (Spring Semester) Course Plan

Course Code	Course Title	C/E	Theory	Practice	ECTS
PLT210	Pathology Laboratory Techniques Practice II	Compulsory	0	12	14
PLT206	Special Histochemistry Techniques	Compulsory	2	1	5
MES202	Professional Ethics	Compulsory	2	0	3
SEÇ201	Elective Course	Compulsory	2	0	2
SEÇ203	Elective Course	Elective	2	0	2

PLT212	Molecular Pathology Techniques	Elective	2	0	4
	TOTAL		10	13	30

Elective Courses

Course Code	Course Title	C/E	Theory	Practice	ECTS
ARŞ202	Scientific Research Techniques	Elective	2	0	2
ÇEV202	Environmental Health	Elective	2	0	2
DAV202	Behavioral Sciences	Elective	2	0	2
DKM202	Medical Documentation	Elective	2	0	2
EMB202	General Embryology	Elective	2	0	2
HEM202	Hematology	Elective	2	0	2
HIS202	Special Histology	Elective	2	0	2
HUK202	Health Law	Elective	2	0	2
İLT202	Communication	Elective	2	0	2
İMH202	Immunohistochemistry	Elective	2	0	2
İSG202	Occupational Health and Safety	Elective	2	0	2
KMY202	Current Chemicals and Drugs	Elective	2	0	2
MNT202	Monitoring	Elective	2	0	2
PRZ202	Parasitology	Elective	2	0	2
PSK202	Healthcare Worker and Patient Psychology	Elective	2	0	2
RDY202	Radiation Protection	Elective	2	0	2
SSH202	Systemic Diseases	Elective	2	0	2
STT202	Special Cytotechnology	Elective	2	0	2
TAY202	Medical Waste Management	Elective	2	0	2
MEİ202	Professional English	Elective	2	0	2
KHB202	Chronic Diseases	Elective	2	0	2
PKY202	Quality Management in Pathology	Elective	2	0	2
AKY202	Disaster and Crisis Management	Elective	2	0	2

COURSE CONTENTS

AlİT101	ATATÜRK'S PRINCIPLES AND HISTORY OF TURKISH REVOLUTION I	Compulsory	2	0	2
Course objectives and resources; basic concepts related to the course and the Principle of Reformism; revolution, uprising, evolution, reform, rebellion and coup; Atatürk's Principle of Reformism and characteristics of the Turkish Revolution; internal and external causes of the decline of the Ottoman Empire; problems in state administration, education, economy and public morality; colonialism, the Industrial Revolution and imperialism; Western ambitions regarding the Ottoman Empire, the Eastern Question and partition projects; Enlightenment, democracy, secularism, nationalism, liberalism and socialism; Ottoman modernization movements; intellectual movements in the late Ottoman period; Tripolitanian and Balkan Wars, World War I and the Armenian issue; Armistice of Mudros and occupations; the National Struggle, national associations and National Forces; Atatürk's arrival in Anatolia, congresses and organization; National Pact, occupation of Istanbul and opening of the Grand National Assembly of Türkiye.					
İNG101	ENGLISH I	Compulsory	2	0	2
This course includes basic English grammar together with reading comprehension, writing, listening comprehension and speaking skills. Verb 'to be'; subject pronouns; possessive adjectives; object pronouns; asking and telling the time; Simple Present Tense I; Wh- questions; Present Simple Tense II; jobs and related verbs; there is/there are; this/those/those; quantifiers; can/can't; was/were; Simple Past Tense (affirmative sentences).					
TD101	TURKISH LANGUAGE I	Compulsory	2	0	2
Course objectives and resources; the concept of language and the place of Turkish among world languages; languages in terms of structure and origin; language-culture relationship and the place of language in social life; punctuation; spelling rules; meaning in words and sentences; expression techniques; official correspondence; auxiliary and basic elements of the sentence; language errors at word and sentence level.					
ANA101	ANATOMY	Compulsory	2	0	3
Introduction to anatomy, general concepts and terminology; skeletal system; joint system; muscular system; circulatory system; respiratory system; nervous system; digestive system; urinary system; female and male reproductive systems; endocrine system; sense organs including skin, olfactory organ, taste organ, eye and ear.					
FİZ101	PHYSIOLOGY	Compulsory	2	0	3
Introduction to physiology, general concepts and terminology; cell and membrane physiology; locomotor-system physiology; circulatory system and blood physiology; respiratory-system physiology; nervous-system physiology; digestive-system physiology; urinary-system physiology; endocrine-system physiology; reproductive physiology; sensory physiology.					
TOĞÜ0941	OUR VALUES	Elective	2	0	2
Definition, importance and scope of values education; helpfulness, love, tolerance, sensitivity, honesty, valuing family unity, responsibility, justice, diligence, respect, thrift, patriotism and general review.					
PLT121	HISTOLOGY	Compulsory	2	0	4
Structures of the cell and its organelles; histology and types of epithelial tissue; histological structure of connective tissue and its components; histological structure and types of cartilage; histological structure of bone tissue; blood-tissue histology; muscle-tissue histology; nervous tissue and histology of the integumentary system.					
PLT119	GENERAL CHEMISTRY	Compulsory	2	0	4
Nomenclature of elements, compounds and mixtures; mass-mole, atomic mass and molecular mass concepts; gases, solutions, acids-bases and buffers; preparation of solutions and mixtures to be used in the pathology laboratory in light of this knowledge.					
PLT109	CYTOLOGY	Compulsory	2	0	4
Overview of the cell; structure of the cell membrane; transport across the cell membrane; specialized differentiations of the cell membrane; membrane-bound organelles I-II; non-membranous organelles; cytoskeleton and cytoplasmic inclusions; nucleus, DNA, RNA and protein synthesis; cell cycle; cell division I-II.					
ENF100	INFORMATION TECHNOLOGIES AND OFFICE SOFTWARE	Compulsory	2	0	3
Computer hardware structure and units; shortcuts; general Windows operations; internet and e-mail operations; word processing: File, Home, Insert, Draw, Design, Layout, References, Mailings, Review and View tabs; scientific writing rules; presentation software: File, Home, Insert, Draw, Design, Transitions, Animations, Slide Show, Record, Review and View; spreadsheet software: File, Home, Insert, Page Layout, Formulas, Data, Review, View and Automate; general applications.					
AlİT102	ATATÜRK'S PRINCIPLES AND HISTORY OF TURKISH REVOLUTION II	Compulsory	2	0	2
Rebellions against the Grand National Assembly, Treaty of Sèvres, fronts of the National Struggle and their results; Mudanya Armistice and Treaty of Lausanne; establishment of the Republic of Türkiye, abolition of the Sultanate, proclamation of the Republic and abolition of the Caliphate; Republicanism, Populism, Secularism, Nationalism and Statism; democratization; secularization of administration, law and education; national history and language institutions; İzmir Economic Congress, nationalization of the economy, support for private enterprise, state-led development and planned economy; reactions to reforms; Turkish constitutions; educational reforms; social reforms; foreign policy of the Republic of Türkiye.					
İNG102	ENGLISH II	Compulsory	2	0	2
Simple Past Tense II; polite requests; linking words and writing; count and uncount nouns; social and shopping expressions; have got/has got; comparative adjectives; superlative adjectives; prepositions of place; relative pronouns; Present Continuous Tense I-II; Present Perfect Tense I-II.					
TD102	TURKISH LANGUAGE II	Compulsory	2	0	2
Phonetics; sentence types according to meaning and structure; word classes including nouns and noun phrases, pronouns, adjectives and adjective phrases, adverbs, verbs, auxiliary/copular verbs, verbals, prepositions and conjunctions; types of written and oral expression.					
PLT124	HISTOTECHNOLOGY I	Compulsory	2	1	5
Operation of pathology laboratories; laboratory safety; tools, equipment and devices used in pathology laboratories; clinical specimen types; specimen acceptance and rejection criteria; fixation; macroscopic examination; tissue processing and problems encountered during processing; tissue blocking; resin/plastic embedding method; microtome types and sectioning; frozen-section techniques.					

PLT120	BIOCHEMISTRY	Compulsory	2	0	3
Scope of biochemistry; biomolecules and cell structures; properties of water and aqueous solutions; proteins; enzymes; carbohydrates; lipids and membrane structures; nucleotides; vitamins; metabolism and bioenergetics.					
PLT130	PATHOLOGY	Compulsory	2	0	4
Mechanisms of injury and structural changes occurring in cells, tissues and organs during disease development; basic pathological concepts required to understand clinical information and pathological diagnoses in pathology reports.					
MIK101	MICROBIOLOGY	Compulsory	2	0	3
Introduction to and history of microbiology; taxonomy and nomenclature of microorganisms; bacteria and their characteristics; nutrition and cultivation of microorganisms; microbial genetics; effects of the external environment on microorganisms; viruses, fungi and parasites and methods of control; microorganism-environment-organism relationships; chemotherapeutic agents.					
PLT128	LABORATORY SAFETY	Compulsory	2	0	2
Introduction to laboratory safety and basic concepts; safe-working rules; hazard and risk; biological hazards; protection from hazards transmitted by blood and body fluids; biological safety cabinets; physical hazards; chemical hazards I-II; personal protective equipment; signs and labels in laboratory safety; waste; emergencies.					
KRY202	CAREER PLANNING	Compulsory	1	0	2
Career concept; discovering personal interests, abilities and values; individual career-development opportunities; expectations of the business world from graduates; CV preparation and sample practice; job interviews and sample simulation; career-planning process and career development; lifelong career planning; introduction to exchange programs; student-sector meetings.					
PLT213	PATHOLOGY LABORATORY TECHNIQUES PRACTICE I	Compulsory	0	12	14
Safety and working rules in pathology laboratories; tools, equipment and chemicals used in the pathology laboratory; use of laboratory devices; solution preparation; tissue fixation and fixative preparation; macroscopic dissection; tissue processing; sectioning from paraffin blocks; frozen section; preparation of routine H&E staining solutions and staining set; H&E staining and microscopic stain-quality evaluation; cytological preparation and cytological staining applications.					
ILK203	FIRST AID	Compulsory	2	0	3
Basic concepts in first aid and emergency health services; first aid in Türkiye and worldwide; emergency health services in disasters; communication; basic principles of first aid; assessment of patients and injured persons; cardiopulmonary resuscitation in adults, children and newborns; special approaches to airway obstruction, hypoxia, pediatric patients and allergic reactions; first aid in penetrating injuries, heat/cold exposure, drowning, burns, trauma, intoxication and bleeding; first aid for older adults, premature infants, newborns and children; patient/injured-person transport techniques.					
ENF201	INFECTIOUS DISEASES	Compulsory	2	0	3
Formation of infection; signs and symptoms; respiratory, blood-borne, fecal-oral and sexually transmitted diseases; hospital infections; intensive-care-unit infections; disinfection and sterilization; personal protection methods; isolation methods; Hospital Infection Control Committee.					
PLT206	HISTOTECHNOLOGY II	Compulsory	2	1	5
Microtomes and tissue sectioning; deparaffinization; histological stains and stain properties; manual hematoxylin-eosin staining; special stains; histochemical staining; immunohistochemical staining; mounting/manual mounting; light microscope; special microscope types and their use; archiving tissue blocks and slides.					
PLT211	CYTOTECHNOLOGY	Compulsory	3	0	5
Sampling techniques and fixation methods in cytological material; cytological slide-preparation techniques; staining methods; cell-block preparation methods and advanced techniques; quality assurance and digital cytopathology; gynecological cytology; respiratory-system cytology; head and neck cytology; breast cytology; gastrointestinal-system cytology; urinary and neurocytology; serous effusions and soft-tissue cytology; skin and postmortem cytology.					
PLT212	MOLECULAR PATHOLOGY TECHNIQUES	Compulsory	2	0	4
Introduction to molecular pathology and basic concepts; structure and function of nucleic acids; genetic mutations and polymorphisms; sample preparation and fixation techniques; nucleic-acid isolation methods and quality control; PCR fundamentals and types; gel electrophoresis and imaging; in situ hybridization; DNA sequencing and next-generation sequencing; cancer genetics and molecular mechanisms of oncogenesis; molecular diagnostic approaches in solid tumors; diagnostic strategies in hematological malignancies; principle of flow cytometry; laboratory safety and reporting in molecular pathology.					
PLT210	PATHOLOGY LABORATORY TECHNIQUES PRACTICE II	Compulsory	0	12	14
Conventional histochemistry techniques and non-gynecological preparation techniques in the practice laboratory; microscopic examination of representative preparations from body systems to distinguish normal and abnormal cells.					
PLT206	SPECIAL HISTOCHEMISTRY TECHNIQUES	Compulsory	2	1	5
Introduction to histochemistry; staining techniques for carbohydrates and amyloid; staining techniques for connective, muscle and adipose tissue; histochemical stains for the nervous system; staining techniques for cytoplasmic deposits, pigments and minerals; enzyme histochemistry; special staining techniques for microorganisms; definition and basic concepts of immunohistochemistry; immunohistochemical staining methods I-II; immunofluorescence; immunohistochemistry in frozen sections and cytological materials; problems encountered in immunolabeling methods; ultrastructural immunohistochemistry.					
PLT126	MACROSCOPIC DISSECTION	Compulsory	2	0	4
Definition of macroscopy and devices used; safety rules; macroscopic descriptions; errors in macroscopy and their effects on diagnosis; stages of macroscopy; specimen adaptation and terminology; macroscopy of appendix, gallbladder, curettage and TUR materials; skin macroscopy; endocrine-organ macroscopy.					
MES202	PROFESSIONAL ETHICS	Compulsory	2	0	3

Concepts of ethics and morality; relationship between ethics and morality; moral values; professional ethics and ethical principles; professional commitment; ethical and unethical issues in working life; ethical principles in business life; ethical and unethical behaviors in management; moral decision-making; analysis and prevention of unethical workplace behavior; influence of organizational culture on ethical behavior; creating an ethical climate; working in accordance with professional ethics; effects of ethical working conditions on work and workplace.

PLT123	MEDICAL TERMINOLOGY	Compulsory	2	0	3
Introduction to medical terminology; pronunciation rules; basic structure of words; roots, prefixes and suffixes; eponymous and acronym terms; basic terms related to movement; respiratory, nervous, digestive, urogenital and endocrine systems; sense organs; basic medical terms related to pharmacology, radiology, nuclear medicine, public health and diseases.					

Note: Course codes, compulsory/elective status, theory/practice hours, ECTS values, and course-content associations were translated as presented in the source PDF. Apparent inconsistencies in the source were not silently corrected.