

T.C.

ÜSKÜDAR ÜNİVERSİTESİ

OPTICIAN DEPARTMENT ASSOCIATE EGREE PROGRAM

Opticians are qualified health technicians with a college degree who supply optical equipment designed to correct and eliminate visual impairments and provide them with the ability to apply them to the patient.

The purpose of this program is; Having general public health knowledge, being enterprising and self-renewing, having adopted the total quality philosophy and being able to support relevant institutional processes, having environmental knowledge related to his profession,

To train technical personnel who know social and ethical problems and their responsibilities, and who observe health and safety measures related to their profession.

Students who graduate from this program can open their own optical stores with the title of "Optician" or work as responsible managers in optical institutions. Opticians work in businesses that make and sell glasses.

Graduates can also benefit from the provisions of the Regulation on the Continuation of Undergraduate Education of Vocational Schools and Open Education Associate Degree Graduates and may gain the right to enroll in undergraduate programs through the vertical transfer exam (DGS) if a quota is opened in their fields.

OPTICIAN PROGRAM COURSE CONTENTS

FIRST CLASS

I. SEMESTER

(ATA 101) Atatürk's Principles and History of Revolution I (2+0), ECTS:2

Concepts definitions, course methods and description of resources, Industrial Revolution and French Revolution, Dissolution of the Ottoman Empire (XIX. Century), Tanzimat and Reform Edict, I. and II. Constitutional Monarchy I. World, Tripoli and Balkan Wars, Armistice of Mudros, Wilson Principles, Paris Conference, M. Kemal's Landing in Samsun and the Situation in Anatolia, Amasya Circular, National Congresses, Opening of the Parliament, Establishment of the Grand National Assembly of Turkey and Internal Rebellions, Law on the Basic Organization of the Regular Army Establishment, I. II. İnönü, Kütahya-Eskişehir and Sakarya Battles and the Great Offensive, agreements during the War of Independence, Lausanne Peace Treaty, Abolition of the Sultanate

(TURK 101) Turkish Language I (2+0), ECTS:2

What is language? world languages, the place of Turkish among them and its historical development, Oral presentation studies, Problems of Turkish today accompanied by current texts, Spelling of "de", "ki" and "mi" accompanied by current texts, Problems related to the spelling of Turkish words (combined, Text analysis: Examination of a scientific article, Applications regarding spelling rules and punctuation marks, Text analysis: Examination of a columnist article, Expression errors, grammatical errors Applications, Turkish as a scientific language accompanied by sample texts, oral presentation exercises.

(INGU 101) English I (2+0), ECTS:2

Meet, verb to be, subject pronouns, demonstrative pronouns, countable/uncountable nouns, quantifiers, simple present tense, frequency adverbs, object pronouns, possessive adjectives, have got/has got, - should, should, (must/mustn t)-may,-be able(can/can t), Past Tense (Simple Past Tense), Present Tense, Conjunctions (and-but-so-because), Comparisons.

(RPSI209) Positive Psychology and Communication Skills (2+0), ECTS: 3

Definition of positive psychology, basic concepts, theoretical foundations and applications, examining the brain behavioral systems of emotional experience and behavior, knowing oneself and others, psycho-social life skills and problem-solving skills, motivation and planning, anger, aggression, violence, relationship. management, sound decision-making, perseverance and compromise.

(OPT 113) Anatomy and Physiology of the Eye (2+0), ECTS: 4

Introduction to Anatomy, Eye anatomy General Information, Layers of the eye, Tunica Fibrosa and its structure, Cornea anatomy Sclera Anatomy, Tunica Vasculosa and its structure, Choroid-Corpus ciliary and iris anatomy, Tunica Neurosa and its structure, Macula-Retina anatomy-Optic nerve, Extraocular neighborhoods and eye muscles anatomy, Eye Physiology, Visual function-Color vision-Three-dimensional vision, Eye and interaction of other organs

(OPT 117) Physics-Geometric Optics I (2+0), ECTS: 4

Ray approximation in geometric optics, reflection, refraction, reflection and refraction laws, refractive index and wave properties of light, full internal reflection, applications of full internal reflection, refractive index, separation of white light into colors and prisms, reflection and image in plane mirrors, special cases in spherical mirrors, image acquisition in spherical mirrors, refraction on spherical refractive surfaces, focal length calculation on spherical refractive surfaces, special cases in thin and thick rimmed lenses, obtaining images in thin and thick rimmed lenses, diffraction of light.

(MAT 101) Basic Mathematics (2+0), ECTS:3

Numbers, Exponents and radical expressions, First degree expressions, Coordination of the plane, Line equation in the plane, First order inequalities, First order equations and inequalities including absolute value sign, vectors, matrix and determinant.

(OPT 119) Opticianry I (2+2), ECTS:6

Definitions of eye, glasses, optician and optician. Application: Introduction of machines, History of vision and optical lenses. Application: Introduction of hand tools used during professional practice, history of opticianry in Turkey Application: Introduction of consumables, Laws and Regulations on Opticianry in Turkey, ethical Application: Acetate frame, processing of organic glasses, Refraction and refractive errors Application: Metal frame, organic glass processing, Diopter definition and calculations Application: Lenses according to dioptric values, Definition of optical lenses Application: Recognition of lenses according to their raw materials and physical structures, Contact lenses Application: Diopter measurement using a photometer, Frames according to their raw materials Application: Metal frame - organic glass craftsmanship, Dioptric and manual identification of spherical, cylindrical and spherocylindrical lenses Application: Readings on the photometer, Transpose definition, calculations Application: On the photometer Calculations, Prescription types and pronunciations Application: Lens definitions suitable for prescription, Optical lens groupings Application: Attaching a mineral lens to a metal frame, Refraction, optical lenses, prescription, transpose procedures, reinforcement of technical terms Application: Basic skills reinforcement

RKUL 101-University Culture-I (USEC) (0+2), ECTS:4

Each semester includes seminars, conferences, panels, workshops and talks to be held for 14 weeks within the framework of a program consisting of suggestions from the academic units at the university, the student council and student clubs.

FIRST CLASS

II. SEMESTER

(ATA102) Ataturk's Principles and Revolutions II (2+0), ECTS:2

Treaty of Lausanne Peace and Its Evaluation, Revolutions in the Political Field, Proclamation of the Republic and Abolition of the Caliphate, Attempts at Transition to Multi-Party Political Life, Revolutions in the Field of Law, Revolutions in the Social Field, Revolutions in the Field of Education and Economy, Turkish Foreign Policy Between 1923-1938 Turkish Foreign Policy Between 1938-1950, Democratic Party Government and Adnan Menderes Period (1950 – 1960), 1960 Coup d'état and Subsequent Political Developments, Türkiye's Domestic Politics in the 1980-2002 Period. ,Basic Principles of the Turkish Revolution (Ataturk's Principles and Integral Principles), Ataturk's Revolutions, Rationality and Scientific Thought; Republicanism and Populism, Nationalism and Statism; Secularism and Revolutionism

(TURK 102) Turkish Language II (2+0), ECTS:2

Oral presentation exercises, What is language; world languages, the place of Turkish among them and its historical development, Problems of Turkish today accompanied by current texts, Spelling of "de", "ki" and "mi" accompanied by current texts, Problems related to the spelling of Turkish words (compound, Text analysis: Examination of a scientific article, Applications regarding spelling rules and punctuation marks, Text analysis: Examination of a corner article, Expression disorders, language errors and applications, Turkish as a scientific language accompanied by sample texts

(INGU 102) English II (2+0), ECTS:2

Tenses: Present tense, Present tense, Past tense, Future tense structures; Modals: Might, Could, Can, Must, May; Adverbs: Adverbs of Place, Direction, Purpose, State; Adjectives: Order of adjectives, Comparison, Superlative structures; Passive Structure: Passive structure in Present, Present, Past, Future tense; Condition Clauses; Adjective Clauses; Transfer Sentences; Verb Structures: TO, -ING; Noun Clauses; Adverb Clauses; Comparative Structures.

(OPT 116) Opticianry II (2+2), ECTS:6

Fitting the glasses to the frame, lens shapes, edge forms on the glasses, prescription writing rules and the concept of addition, verification of the prescription and data control, prescription data selection of eyeglass lenses and frames, pricing of eyeglass lenses and frames, standards for glasses and lens frames, centration and decentration. Glasses of single chamber lenses mounting to the frame and making glasses, Mounting of cylindrical lenses to the glasses frame and determining the axis, Adjusting the glasses frames to the human face, Marking the projection of the visual axis of the eye on the glasses frame on the vertical and horizontal axis, methods of taking the focal point, Methods of taking the focal point from the eye for single and multifocal lenses, measurement methods of the pupillary distance,

(OPT114) Physics Geometric Optics II (2+0), ECTS:4

Light Theories, Polarization of Light, Prisms and distribution in prisms, Optical systems, laws of reflection in spherical mirrors, refraction on spherical refracting surfaces, thin lens relation, thin lens systems, thick lenses. Interference, properties of ultraviolet lights, compound prism calculations, diffraction in thin membranes, single slit diffraction of light, double slit diffraction of light, polarization, constructive and non-constructive interference, diffraction, scattering, reflection, transmission and absorption of rays, properties of illumination light, laser sources, laser output

(OPT140) Eyeglass Glass Technologies (2+0), ECTS:2

Definition of glass types in the optical sector. Spherical and Aspheric glasses, Organic glasses, Mineral glasses, Astigmatic glasses and the differences between their advantages and disadvantages, Prism glasses (Fresnel). Lens aberrations Current methods of producing organic glasses. ophthalmic lens material and design, special types of lenses, sports lenses, bifocal lenses, lenticular lenses.

(OPT238) Eye Diseases (2+0), ECTS:4

Eyelid Diseases, Tear System Diseases, Tear System Diseases, Cornea Hst, Sclera Diseases, Lens and

Cataract Hst, Uvea Diseases, Glaucoma, Retina, Optic Nerve, Eye Movements and Strabismus, Vitreous Diseases, Ultraviolet and Eye, Eye Injuries

(OPT242) Labor and Social Security Legislation (2+0), ECTS:4

Subject, scope and features of labor law, employment contract, elements, types of employment contract, regulation of employment relationship in terms of wage, time and persons, General Information about Social Security Law, concepts related to work accident and occupational disease, Unemployment and General Health Insurance, occupational health and safety practices in Turkey, current developments in the field of labor and social security law.

RKUL 102- University Culture-II (USEC) (0+2), ECTS:4

Each semester includes seminars, conferences, panels, workshops and talks to be held for 14 weeks within the framework of a program consisting of suggestions from the academic units at the university, the student council and student clubs.

SECOND CLASS

III.SEMESTER

(OPT207) Opticianry III (2+2), ECTS:11

Focus point determination and marking in multifocal and prismatic lenses with a photometer. Ophthalmic prisms, prismatic effect, calculation of prism direction and amount, principles of prism use, areas. Recognition of telescopic glasses. Single and multifocal lenses in various materials installation work on frames. General information about contact lenses. Transpose operations and calculation of the addition value, errors made in the software and application of the glasses prescription. Low vision devices, special purpose frames, glasses repair, template removal and centering. Giving information about the installation of lenses on Nylon and Glazan glasses. Reflections and coatings on lenses, anti-reflection and its benefits, absorption, polarizing lenses and their installation

(OPT235) Visual Optics and Refraction I (2+0), ECTS:5

General information about optics, lens types, aberrations, prisms, visual physiology, schematic eye, vision and visual field, visual field examination methods and vision losses, light reaction and color vision, visual acuity, optical defects, retina.

(OPT237) Clinical Optics and Rehabilitation (2+0), ECTS:4

Emetropization, Geometric Optics, Optical Irregularities, Optics of the Human Eye, Refractive Errors, Lenses, Anamnesis, Incorrect Prescription, Subjective Examination Methods, Prism, Refraction and Prescription in Children, Objective Examination Methods, Optical Evaluation in Refractive Surgery, Color Vision, Legal Blindness, Telescope and Optical Devices, Low Vision.

(OPT239) Contact Lenses (2+0), ECTS:4

Definition of the contact lens, its relationship with the cornea on which it is applied, examinations required for contact lenses and optical properties and principles of contact lenses, purposes of use of contact lenses, desired and sought-after features in contact lenses, comparison of contact lenses and glasses, hard contact lenses, hard gas permeable contact lenses, soft contact lenses, hydrogel lenses, silicone lenses, hybrid contact lenses, disposable contact lenses, therapeutic contact lenses, aphakic contact lenses, contact lenses in pediatric ophthalmology, cleaning solutions, rinsing solutions content usage areas, disinfectants, wetting solutions, lens containers and other materials content usage areas, use with cosmetics and contact lenses, adaptation symptoms, toxic effects of contact lenses infectious-allergic and other complications, rules to be followed regarding contact lenses, manipulation of contact lenses

(OPT209) Marketing Principles and Brand Strategies (2+0), ECTS:4

Marketing concept, Stages of marketing understanding, Marketing Principles, Relationship between consumer behavior and marketing strategy, Market segmentation, Target market strategies, Learning and memory, Motivation and involvement, Attitudes, Self and personality, Values, lifestyles and culture, Reference groups, family and gender, Purchasing decision process, Marketing communication and persuasion techniques

SECOND CLASS

IV.SEMESTER

(OPT200)Optician VI (2+4), ECTS:12

Focus point determination and marking in multifocal and prismatic lenses with a photometer. Ophthalmic prisms, prismatic effect, calculation of prism direction and amount, principles of prism use, areas. Recognition of telescopic glasses. Single and multifocal lenses in various materials installation work on frames. General information about contact lenses. Transpose operations and calculation of the addition value, errors made in the software and application of the glasses prescription. Low vision devices, special purpose frames, glasses repair, template removal and centering. Giving information about the installation of lenses on Nylon and Glazan glasses. Reflections and coatings on lenses, anti-reflection and its benefits, absorption, polarizing lenses and their installation

(OPT236) Visual Optics and Refraction II (2+0), ECTS:5

emmetropia and ametropia concepts and types, myopia and hyperopia, astigmatism and types of astigmatism, presbyopia, cycloplegia, objective methods in measuring refractive errors, scyascopy, subjective methods in measuring refractive errors, correction of myopia and hyperopia with glasses, correction of astigmatism with glasses, anisometropia, correction of refractive errors with surgical methods, prismatic use of glasses.

(MYO015) Social Responsibility Project (2+0), ECTS:2

Introduction to the course, basic concepts, an overview of the concept of social responsibility and social responsibility campaigns, determination of project topics (children, elderly, women, environmental problems, people with education and learning problems, patients and health problems, etc.) project preparation and presentation. Getting to know non-governmental organizations and their work.

(OPT240) History of Opticianry and Professional Ethics (2+0), ECTS:4

Terms related to optics in the world and various branches of optical science, refraction, opticianship and its historical development in the world, opticianry and its historical development in Turkey. Optical and Optometric professions and professionals, National and international organizations related to opticianry. Definition of Opticianry as a profession and philosophy of Opticianry. The duties and responsibilities of the Optician in eye health. Turkey's Optician
Need, To examine the concepts of ethics and morality, To examine ethical systems and factors that play a role in the formation of morality, To examine the factors that play a role in the formation of morality, To examine professional ethics, To examine professional corruption and the consequences of unethical behavior in professional life.