



## **Faculty of Pharmacy and Medical Sciences**

### **Department of Audiology and Speech Phathology**

#### **93111 General Chemistry (1) {3} [3-3]**

Introduction to chemical sciences; Matter: Classification, Properties of different types of matter; Elements and the periodic table: Nomenclature, Simple ionic and covalent compounds, Measurements, and significant figures; Stoichiometry: % composition, formulas, and chemical equations; Chemical reactions of aqueous solutions: acids, Bases and salts; Oxidation-reduction reactions; Electronic configuration of atoms: Properties of ionic and covalent bonds, and Lewis structure.

*Prerequisite:* -

#### **93113 General Chemistry Lab {1} [2-1]**

Introduction to laboratory safety Rules; Physical Separation of mixtures: Distillation, extraction, and recrystallization; Empirical formula of compound; Determination of acid and base in vinegar; Indicators; buffers; measurement of pH; Identification of chemical substances; Solutions.

*Prerequisite:* -

#### **93114 Biology (1) {3} [3-3]**

Introduction to general biology; Water; Macromolecules; Cell; Membrane; Metabolism; Cellular Respiration; Cell Cycle; From Gene to Protein.

*Prerequisite:* -

#### **93115 Biology (2) {3} [3-3]**

The biological diversity; Diversity of the five kingdoms of living organisms: Organisms, Monerans, and Protists; The major phyla of the animal kingdom; The structure and function of systems and organs of the animals (using the human body as a model); Survey on plant: Structure, function diversity, and its ecological importance.

*Prerequisite:* 93114 Biology (1)

#### **93116 Biology Lab {1} [2-1]**

Introduction to Biology Lab; Compound light microscope; Preparing slides: Plant tissue, and animal tissue; Physical and chemical properties of cell; Histology; Animal tissue; Basic microbiological techniques to identify gram positive and gram negative bacteria; Plants and its life cycle: Algae, fungi, and bryophytes; Introduction to protozoan: vertebrate, and dissect example of vertebrates



*Prerequisite: -*

**93120 Organic Chemistry {3} [3-3]**

Introduction to organic chemistry; Bonding: Polarity, Structural formulas, Isomerism, and Hybridization; Classification of organic compounds; Aliphatic compounds: Nomenclature and reactions, Alkanes, alkenes, alkynes, and cycloalkanes; Aromatic compounds; Alcohols; Ethers; Aldehydes; Ketones; Carboxylic acids; Esters; Acyl halides; Amides; Amines.

*Prerequisite: 93111 General Chemistry (1)*

**36129 General Physics {3} [3-3]**

Introduction to Physics; Measurement and standards; Physical quantities; Vectors; Addition and multiplication of vectors; Motion in straight line: displacement, velocity, acceleration, finding the motion of an object, free fall, and vertical jumping; Motion in two dimensions; Projectile in Biomechanics; Newton's laws: Static C.G., Levers in the body, muscles and, and jaws of animals; Collisions.

*Prerequisite: -*

**36112 Mathematics {3} [3-3]**

Introduction to Calculus; The rate of change of a function; Limits; Derivatives of algebraic functions and their applications; Integration; Application of the definite integral.

*Prerequisite*

**91471 First Aid {1} [1-1]**

Introduction; Manufacturing of pharmaceuticals; Basic principles of industrial processes: Mixing, Milling, Drying, Sterilization; Transfer processes; Unit operation.

*Prerequisite: 91215 Physiology (2)*

**91316 Pathology {2} [2-2]**

Introduction; Fundamental principles of pathophysiology; Cell and tissue injury; Acute and chronic inflammation; Tissue regeneration and repair; Disease of immune system; General pathology of infectious diseases; Neoplasia and hemodynamic disturbances.



**Prerequisite: 91215 Physiology (2)**

**29101 Introduction to special education {3} [3-3]**

Introduction; Special education; Mental retardation: Hearing impairment, Visual impairment, and Physical impairment; Learning disabilities; Emotional disturbance; Autism; Speech and language disorders; Talent and giftedness.

**Prerequisite: -**

**26152 Principles of Guidance and Conselling {2} [2-2]**

Introduction; Counseling and Guidance; Counseling as science and art; Personal qualities of effective helper; Scope of practice; Ethical and legal aspects of counseling.

**Prerequisite: -**

**96111 Principles of Hearing and Speech {3} [3-3]**

Introduction; Basic concepts of human communication; Communication disorders: Basic information regarding various language, articulation, voice , fluency and hearing disorders; Brief orientation to the profession of speech pathology and audiology.

**Prerequisite: -**

**96117 Anatomy Related to hearing and speech {3} [3-3]**

Introduction; Review of basic anatomical and physiological concepts; The outer and middle ears; The cochlea; Cranial Nerve VIII; The central auditory pathways; Vascular Anatomy of the Auditory System; The Respiratory System; The Laryngeal System; The Skull; The Articulators and Associated Structures.

**Prerequisite: 93115 Biology (2)**

**96118 Introduction to linguistics {3} [3-3]**

Introduction; Nature of language; Phonetics/phonology; Morphology; Syntax; Semantics; Pragmatics; Historical linguistics; Sociolinguistics.

**Prerequisite: -**

**96119 Introduction to phonetics {3} [3-3]**

Introduction; The acoustical; Articulatory and auditory features of speech sounds.

**Prerequisite: 91118 Introduction to linguistics**



### **96213 Language acquisition and development {3} [3-3]**

Introduction; Language and its relation to communication and speech; Characteristics of human language; Language modalities; Communication competence; Biological basis of language; Development of language speech subsystem; The operant model: Skinner's verbal behavior; Piaget's theory of language; Chomsky's language acquisition device; Fillmore's case grammar; Searle's Speech act theory; Infant communication development; Toddlers communication development; Preschoolers communication development.

***Prerequisite: 96119 Introduction to phonetics***

### **36231 Acoustics {2} [2-2]**

Introduction; Orientation to the acoustical features of sound and the sound transmission in the environment.

***Prerequisite: 36129 General Physics***

### **96218 Psychoacoustics {2} [2-2]**

Introduction; Orientation to the acoustical features of sound and the sound transmission in the environment.

***Prerequisite: 36231 Acoustics***

### **96201 physiology of speech and Hearing {3} [3-3]**

Introduction; Illustrative models and computer software to highlight physiological functions of speech and hearing systems.

***Prerequisite: 96117 Anatomy Related to hearing and speech***

### **96417 Instrumentation for speech {2} [2-2]**

Introduction; Illustrative models and computer software to highlight physiological functions of speech and hearing systems.

***Prerequisite: 96201 physiology of speech and Hearing***

### **96228 Hearing Evaluation (I) {2} [2-2]**

Introduction; Technique and interpretation of conventional hearing investigations: pure tone audiometry, masking, speech audiometry, tympanometry, acoustic reflexes, reflex decay, acoustic reflex decay, SISI, and ABLB; Interpretation and reporting the results of hearing; Assessment for medical legal aspects.



***Prerequisite: 36213 Acoustics***

**96229 Hearing Evaluation Lab (I) {1} [2-1]**

Introduction; Clinical training on the use of different audiometric equipment: a tuning fork, otoscope, pure tone hearing test, examination of the middle ear pressure, muscle contraction passenger screening, and hearing test verbal; Interpretation of conventional audiological investigation of adults and children over 5 years old. Interpretation of audiometry results.

***Prerequisite: -***

**96234 Language disorders for children {3} [3-3]**

Introduction; Principle issues and research concerning various speech and language disorders in children; Assessment and management of such disorders.

***Prerequisite: 36231 Acoustics***

**96235 Language disorders for children {3} [3-3]**

Introduction; Stuttering causing factors; Development of stuttering; Stuttering assessment; Stuttering treatment.

***Prerequisite: 96201 physiology of speech and Hearing***

**96236 Articulation and Phonological disorders {3} [3-3]**

Introduction; Articulatory Phonetics: Phonetic Transcription; Normal Phonological Development; Prelinguistic Stages; Assessment and Evaluation: Evaluation by the Clinician, Initial Impression, Articulation Tests, and Diagnosis; Preliminary Analysis; Decision Making; Measures of Intelligibility and Severity; Articulation versus; Phonological Disorders; Therapy for Phonetic Errors.

***Prerequisite: 96201 physiology of speech and Hearing***

**96243 Language disorders of hearing impaired children {1} [1-1]**

Introduction; Language disorders of hearing: Hearing disorders, Study of the language level, and Description of language and speech development for the hearing impaired children; Assessment of communicative difficulties in these children, and the various lines of management.

***Prerequisite: 96228 Hearing Evaluation (I)***

**96251 Learning Disabilities {3} [3-3]**



Introduction; Language disorders of hearing: Hearing disorders, Study of the language level, and Description of language and speech development for the hearing impaired children; Assessment of communicative difficulties in these children, and the various lines of management.

***Prerequisite: 29101 Introduction to special education***

**96252 Behavior Modification {3} [3-3]**

Introduction; Aims of counseling and Guidance; Principles of counseling and Guidance; Famous theories used in counseling and Guidance; Means of getting information to help clients; Method of counseling and Guidance and the characteristics of the counselor.

***Prerequisite: 96251 Learning Disabilities***

**96308 Introduction to speech training {2} [2-2]**

Introduction; Team work: Professions the co-operate, with SLPs in the rehabilitative process, and SLPs role in the rehabilitative process; The clinic; Instrumentation in speech language pathology; Assessment of language disorders: SLI, aphasia, stuttering, phonological, disorders, voice disorders, and motor speech disorders; Treatment.

***Prerequisite: 96213 Language acquisition and development***

**96302 Speech evaluation (Observation) {1} [1-1]**

Introduction; Sessions in the speech clinics; Standard operating procedures of a speech clinic; Instruments of Speech Pathology.

***Prerequisite: -***

**96303 Hearing Evaluation (2) {2} [2-2]**

Introduction; Comprehensive survey of theoretical and applied auditory physiological measures; Evoked neural responses; Otoacoustic emission; Cochlear implant selection procedures.

***Prerequisite: 96228 Hearing Evaluation (I)***

**96304 Hearing Evaluation Lab (2) {1} [2-1]**

Practical training of students to test the hearing of adults

***Prerequisite: -***

**96305 Hearing Evaluation (3) Pediatric {2} [2-2]**



Introduction; Application of audiologic test procedures; Rehabilitation techniques: Study of risk criteria and screening protocols for neonatal, infants, preschool and school children; Habilitation programs for: Neonates, infants, and children.

***Prerequisite: 96303 Hearing Evaluation (2)***

**96306 Noise induced hearing loss {2} [2-2]**

Introduction; Orientation to the possible environmental causes that results in hearing loss, prevention and the measurement of noise in nature.

***Prerequisite: 96303 Hearing Evaluation (2)***

**96307 Neurogenic speech and language disorders {3} [3-3]**

Introduction; Neuroanatomy; Neurophysiological aspects related to speech and language functions: Neurological insults that result in neurological voice, and speech.

***Prerequisite: 96209 Neurology***

**96318 Clinical practicum in speech (1) {2} [2-2]**

Introduction; Clinical practicum in speech: Profession, code of ethics, organization of the clinics, filing system, and general lines of evaluation; Orientation to filling of all the record forms: report writing, and treatment progress sheets; Observation and partial involvement in assessment and therapy of language: articulation, and phonological disordered patients.

***Prerequisite: 96308 Introduction to speech training***

**96323 Voice Disorders {3} [3-3]**

Introduction: Physiology of the vocal mechanism; Pathologies of the vocal mechanism; Assessment of voice including elementary: Clinical, and additional instrumental measures; Discussion of various therapeutic approaches including: pharmacological, behavioral, surgical, and technical aid devices.

***Prerequisite: 96201 physiology of speech and Hearing***

**96324 Clinical Practicum in Speech (2) {2} [2-2]**

Introduction; Training in the speech clinic; Assessment; Treatment of different types of disorders in children and adults; Clinical presentation and submission of diagnostic reports; Administration of various language and speech tests.



***Prerequisite: 96318 Clinical practicum in speech (1)***

**96325 Clinical Practicum in Audiology (1) {2} [2-2]**

Introduction; Orientation of all hearing tests of adults with application of such tests on normal's.

***Prerequisite: 96304 Hearing Evaluation Lab (2)***

**96335 Auditory-Verbal therapy {3} [3-3]**

Introduction; The designed Therapy to teach a child to use the hearing provided by a hearing aid or a cochlear implant for understanding speech and learning to talk; Auditory-Verbal Therapy Methods; Theory and application of the auditory-verbal approach to the habilitation.

***Prerequisite: 96236 Articulation and Phonological disorders***

**96409 Hearing Evaluation (4) Electrophysiology {3} [3-3]**

Introduction; Advanced audiological investigation of hearing; Evoked potentials measurements; Acoustic emission.

***Prerequisite: 96305 Hearing Evaluation (3) Pediatric***

**96414 Instrumentation for hearing {3} [3-3]**

Introduction; Basic electronics, electroacoustic equipment, technique for measuring sound properties and equipment of calibration.

***Prerequisite: 96409 Hearing Evaluation (4) Electrophysiology***

**96415 Clinical Practicum in speech (3) {2} [2-2]**

Introduction; The course includes involvement of the students in working with patients; Full assessment and therapy; Counseling and Interviewing techniques; Writing full reports; Treatment plans; Progress notes.

***Prerequisite: 96324 Clinical Practicum in Speech (2)***

**96415 Clinical Practicum in speech (3) {2} [2-2]**

Introduction; The course includes involvement of the students in working with patients; Full assessment and therapy; Counseling and Interviewing techniques; Writing full reports; Treatment plans; Progress notes.

***Prerequisite: 96324 Clinical Practicum in Speech (2)***





**96421 Hearing aids {2} [2-2]**

Introduction; Hearing aids; Acoustical and Electronic features; The Ear moulds, and manufacturing; The acoustical issues of the ear moulds.

***Prerequisite: 96303 Hearing Evaluation (2)***

**96422 Hearing aids Lab {1} [2-1]**

Introduction; Applied study of the hearing aids components and preparing the ear moulds.

***Prerequisite: -***

**96424 Clinical practicum in Audiology (2) {2} [2-2]**

Introduction; Orientation of the different hearing tests in the hearing impaired adults.

***Prerequisite: 96325 Clinical Practicum in Audiology (1)***

**96425 Clinical practicum in Audiology (3) {2} [2-2]**

Introduction; Orientation of the different hearing tests; Children suffering hearing loss; Actual application of such tests and completing the evaluation and diagnosis process.

***Prerequisite: 96424 Clinical practicum in Audiology (2)***

**96434 Aural rehabilitation {2} [2-2]**

Introduction; Importance of Hearing; Impact of Hearing Problems; Hearing Loss; Assessment of Hearing & Speech Recognition; Listening Devices; Management of Cochlear Implants; Emotional Response to Hearing Loss; Family Counseling for Children with Hearing Loss; Primary Language Development; Auditory Training; Strategies for Facilitating Hearing and Listening; Communication Strategies Training.

***Prerequisite: 96421 Hearing aids***

**96435 Nonverbal Communication {2} [2-2]**

Introduction; Message and vocabulary; Symbols and communication; Alternative access to the device; Assessment in Augmentative and Alternative Communication (AAC); Assessment of specific capabilities; AAC and developmental disabilities; AAC in language learning and development; Training programs.

***Prerequisite: 96307 Neurogenic speech and language disorders***



### **96440 Introduction to Balance Disorders and Evaluation {2} [2-2]**

Introduction; The basic principles of vestibular: Evaluation including case history, procedures, and interpretation.

***Prerequisite: 96409 Hearing Evaluation (4) Electrophysiology***

### **96441 Resonance disorders and cleft palate {2} [2-2]**

Introduction; Anatomy & Physiology of the VP Port; Embryology & Classifications of Cleft Lip & Palate; Genetics in Craniofacial Anomalies; The Interdisciplinary Team for Management of Craniofacial Anomalies; Surgical Intervention; Prosthodontic Management; Audiological Management; Etiology of the Speech Disorders in Patients with Cleft Palate; Assessment & Evaluation of Velopharyngeal Function & Cleft Palate Speech Disorders; Nasometry & VP Inadequacy; Speech Intervention, Rationale & Principles; Early Speech Intervention; Speech Intervention for Preschool-Age Children; Speech Intervention for School-Age & Adults with Clefts.

***Prerequisite: 96323 Voice Disorders***

### **96440 Swallowing disorders {2} [2-2]**

Introduction; Anatomy of Swallowing; Physiology of Swallowing; Clinical Assessment of Dysphagia: Radiographic Contrast Examination of the Mouth, Pharynx, and Esophagus I; Radiographic Contrast Examination; Mouth, Pharynx, and Esophagus II; Neurologic Diseases Affecting Oropharyngeal Swallowing; Diseases and Operation of Head and Neck Structures Affecting Swallowing; Development of Feeding Skills; Etiologies of Feeding and Swallowing; Disorders in Children; Compensatory Treatment Procedures; Therapy Procedures; Medical Intervention; Surgical Management of Impaired Bolus Transit; Nutritional Support Bypassing Oropharyngeal Swallowing.

***Prerequisite: 96307 Neurogenic speech and language disorders***

### **96226 Otology {3} [3-3]**

Introduction; Ear pathologies; Ear pathologies affecting both hearing and vestibular functions; Diagnosis and medical treatment of those pathologies.

***Prerequisite: 91316 Pathology***

### **25151 Developmental Psychology {3} [3-3]**

Introduction; Definitions and concepts in developmental psychology; Comprehend principles of developmental psychology; Methods of research in developmental psychology Basic; Theories of developmental psychology; Understand psychoanalysis theories; Theories of developmental psychology; Cognitive theories, and Social cognitive theories; Prenatal stage; New born infant stage; Comprehend Sensation development; Early childhood stage; Adolescence stage.



***Prerequisite:* 96325 Clinical Practicum in Audiology (1)**

**26209 Neurology {3} [3-3]**

Introduction; Functional anatomy, physiology, and Pathology of relevant nervous system structures involved in the speech; Language and hearing processes of communication.

***Prerequisite:* 96117 Anatomy Related to hearing and speech**

**96443 Methods of scientific research {1} [1-1]**

Introduction; Scientific method of research; Tools of research; Statistical measurements.

***Prerequisite:***