# NEW ANATOMY CURRICULUM

# FOR

# DEPARTMENT OF ANATOMY

FACULTY OF BASIC MEDICAL SCIENCES

**June 2022**

**COURSE OUTLINE**

**FIRST YEAR**

1ST SEMESTER

**COURSE CODE CREDIT UNITS COURSE TITLE**

GSS 1101 2 Use of English

GSS 1103 2 Introduction to Computer

MATH 1101 3 General Mathematics I

CHM 1101 3 General Chemistry I

PHY 1101 3 General Physics I

BIO 1111 3 General Biology I

GSS 1102 2 Philosophy and Nigerian Religion

BIO 1112 3 Genetics and Biotechnology

PHY 1102 2 Laboratory Physics

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SECOND SEMESTER

**COURSE CODE CREDIT UNITS COURSE TITLE**

GSS 1201 2 Use of English

GSS 1202 2 Philosophy and History

GSS 1203 2 Nigerian People and Culture

MATH 1201 3 General Mathematics II

CHM 1201 3 General Chemistry II

BIO 1211 3 Introductory Biology II

PHY 1203 3 General Physics II

**18**

**SECOND YEAR**

1ST SEMESTER

**COURSE CODE CREDIT UNITS COURSE TITLE**

ANA 2101 2 Gross Anatomy of Upper and Lower Limbs

ANA 2102 2 **Embryology** **I**

ANA 2103 2 **Histology** **I**

PHS 2101 2 Introductory Physiology, Excitable Tissue, ANS

PHS 2021 2 Blood, HIV/AIDS and other Blood Diseases

PHS 2103 2 Cardiovascular Physiology

BCM 2101 2 General Biochemistry I

BCM 2103 2 Nutritional Biochemistry

BCM 2102 2 Chemistry of Biomolecules

GSS 2101 2 Peace and Conflict Resolution

**20**

SECOND SEMESTER

**COURSE CODE CREDIT UNITS COURSE TITLE**

ANA 2201 3 Gross Anatomy of Thorax, Abdomen, Pelvis and

Perineum

**ANA 2202 2 Embryology II**

**ANA 2203 2 Histology II**

ANA 2204 2 Neuroanatomy I

PHS 2204 2 Gastrointestinal Tract

PHS 2205 3 Renal, Body Fluids, Skin and Temperature Regulation

PHS 2206 2 Respiratory System

BCM 2201 2 General Biochemistry II

BCM 2202 2 Introduction to Metabolism of Biomolecules

**20**

**THIRD YEAR**

1ST SEMESTER

**COURSE CODE CREDIT UNITS COURSE TITLE**

ANA 3101 2 Gross Anatomy of Head and Neck

ANA 3102 2 Introduction to Forensic Science

ANA 3103 2 Advanced embryology & Reproductive technique

ANA 3104 2 Medical imaging: Sonographic & Radiographic anatomy

**ANA 3105 2 Anatomical Laboratory Techniques**

**ANA 3106 2** Aesthetics & Cosmetology

**ANA 3107 2 Morbid Anatomy & Funeral Practice**

ANA 3108 2 Basic Histopathology

ANA 3109 2 **Prosthetics & Human Biomechanics**

PHS 3102 2 Neuro-physiology I: Central Nervous System

ENT 3101 1 Entrepreneurship

**21**

2ND SEMESTER

**COURSE CODE CREDIT UNITS COURSE TITLE**

**ANA 3201 6 Students work experience**

**FOURTH YEAR**

1ST SEMESTER

**COURSE CODE CREDIT UNITS COURSE TITLE**

ANA 4101 2 Neuroanatomy II

**ANA 4102 2 Sports Anatomy**

ANA 4103 2 Comparative Anatomy and History of Anatomy

**ANA 4104 3 Forensic Anthropology and Biometrics**

ANA 4105 3 Physical Anthropology

ANA 4106 2 Research Methods and Biostatistics

**ANA 4107 2 Anatomical Enterprise**

**16**

2ND SEMESTER

**COURSE CODE CREDIT UNITS COURSE TITLE**

ANA 4201 3 Seminar/Practicals

ANA 4202 2 Cell and Molecular Biology

ANA 4203 2 Histochemistry

ANA 4204 6 Project/Viva

ANA 4205 3 Forensic Anthropology Applications

**ENT 3201 1 Enterpreneurship II**

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**COURSE COURSE**

**CODE DESCRIPTION**

**FIRST YEAR SECOND SEMESTER**

**BIO 1112 Genetics and Biotechnology**

Introduction to history and principles of Genetics; Introduction to genetic disorders; Classification of genetic disorders; Genetic basis of disease: a. Chromosomal disorders + examples, b. DNA mutations + examples, c. Multifactorial disorders + examples, d. (Non-classical genetic disorders; Teratogenesis & congenital malformation (Birth defects), Prenatal diagnosis & Genetic counseling, Basics of genetic testing (principles, indications, clinical significance, and interpretation of results). Biotechnology: Amplifying, Modifying, and Monitoring DNA.

**SECOND YEAR FIRST SEMESTER**

**ANA 2101 General Anatomy and Gross Anatomy of Upper and Lower Limbs: 2 Credit units**

Introduction Definition of Anatomy Subdivision of anatomy, Anatomical terminologies, levels of structural organization. The skin and its appendages, the muscles, the circulatory system, the nervous system, the joints, the skeletal system and visceral system. Anatomical variations. The Scapular Region and Breast. The Axilla, the arm, the forearm, the wrist and hand the Hip and the thigh. The leg, ankle and foot.

**ANA 2102 Embryology I: 2 Credit units**

Further Development of Embryonic disc, Folding of Embryo. Formation of the tissues of the body and derivatives of germ layer, Formation of intraembryonic cavity, serous membrane, diaphragm and thoracic cavity. Germ cell and gametogenesis (Spermatogenesis/Oogenesis). Anomalies of autosomal and sex chromosome structures, Mutation Gene and diseases. Reproduction Cycles (menstrual and ovarian cycles), Structure of ovum, ovulation and its role in family planning. Fertilization, Cleavage, Formation of the blastocyst, Formation of germ layers, formation of neural tube and notochord, development of somites. Development and subdivisions of Intraembryonic Mesoderm and Coelom, Development of Placenta and anomalies. Early development of cardiovascular system. Development of Heart and great Vessels. Anomalies of Heart and great vessels. Aortic arch derivatives and anomalies. Foetal circulation. Development of lymphatic system. Development of digestive system (Foregut, midgut, hindgut) and associated organs – Liver, gall bladder, spleen, pancreas. Rotation of gut and anomalies of development of GIT.

**ANA 2103 Histology I: 2 Credit units**

Introduction, Definition of histology, Histological methods, Electron microscopy, Histochemistry, Immunocytochemistry, autoradiography, Levels of structural organization, cells Tissues organs, Cell structure, General study of Primary tissues, Epithelia Including Blood and Mononuclear phagocyte system, Cartilage and Bone; Muscle tissue and Nervous Tissue. Histology of Cardiovascular system, Heart, arteries, arterioles, veins, venules, capillaries, sinusoids. Histology of Digestive system and related Oral cavity (Teeth, tongue and salivary glands), Basic structure of the gastrointestinal tract, Oesophagus. Stomach, Small intestine, Large intestine, Endocrine cells of the gut, The Liver extrahepatic biliary apparatus and the pancreas.

**SECOND YEAR SECOND SEMESTER**

**ANA 2201 Gross Anatomy of Thorax, Abdomen, Pelvis and Perineum: 3 Credit units**

The thoracic cage. Intercostal spaces, the mediastinum, the lung and pleura, the heart and the pericardium. Thoracic Diaphragm Abdominal wall muscles and fasciae of abdominal wall. Formation of the rectus sheath. The peritoneum. Abdominal viscera (Liver and gall bladder, stomach, intestine, spleen, kidneys pancreas, suprarenal glands) and their blood supply, lymphatic, autonomic control and applied anatomy. The bony pelvis, pelvic peritoneum. Pelvic viscera (rectum, anal canal, urinary bladder, urethra, ovaries and testes).Muscles and fasciae of pelvic wall. Superficial structures of urogenital triangle, superficial and deep spaces of the perineum.

**ANA 2202 Embryology II: 2 Credit units**

Development of the larynx, trachea, bronchi, lungs and associated anomalies. Development of the diaphragm and anomalies. Development of urinary system (Kidneys, ureters, urinary bladder. Urethra). Development of genital system development of gonads and their descent, genital ducts and associated glands, external genitalia).Development of suprarenal gland. The pharyngeal apparatus Development. Fate derivative and anomalies of pharyngeal groves and pharyngeal membranes: Development of thyroid glands. Tongue, salivary glands, face, nasal cavities and palate. Development and congenital anomalies of spinal cord and brain. Development of peripheral nervous system and autonomic nervous system. Development of eye and related structures.

**ANA 2203 Histology II: 2 Credit units**

Histology of the nasal cavities, pharynx, larynx trachea and bronchial tree, the lung. Lymphatic system: Lymphatic vessels, lymph nodes, spleen and thymus.

Histology of kidney, ureters, urinary bladder and urethra. Gonads (ovary and testis) and accessory urogenital organs (epididymis vas deferens, seminal vesicle, prostate gland, penis and clitoris. Skin and its appendages (Hairs, sebaceous glands, nails, sweat glands). Histology of nervous system, neuron structure, ganglia, neuroglia. Cerebrum, cerebellum and spinal cord.

Histology of special senses: Eye (sclera, cornea, choroids coat, retina, lens) and Ear (External ear, middle ear and internal ear). Endocrine Glands Histology of the pituitary gland, pineal gland, thyroid gland, parathyroid glands, suprarenal glands. APUD cell system.

**ANA 2204 Neuroanatomy I: Neuroanatomy of Spinal cord, Brain Stem. Tracts of Spinal Cord and Brain Stem: 2 Credit units**

Introduction to neuroanatomy development and general plan of the nervous system, the Neuron structure (Cell bodies and processes, Nerve endings), synapse, peripheral nerves, degeneration and regeneration of neurons. Neuroglia Development of spinal cord Gross and microscopic anatomy of the spinal cord and the brain stem. Tracts of spinal cord and brain stem Descending tracts ending in spinal cord and brain stem, ascending tracts of spinal cord and brain stem, pathways connecting the spinal cord to cerebral cortex, ascending pathways ending in brain stem and spino-cerebellar pathways. Gross anatomy of cerebellum subdivisions, grey matter and white matter, cerebellar peduncles, structure of the cerebellar cortex and major connections of the cerebellum. Cerebellar peduncles and functions of the cerebellum

**THIRD YEAR FIRST SEMESTER**

**ANA 3101 Gross Anatomy of Head and Neck: 2 Credit units**

The skull and cervical vertebrae. The scalp Layers of the scalp, blood supply, nerve supply, lymphatic drainage and applied anatomy. The Face Superficial structures and deep structures. Cranial Cavity Brain and Meninges, cerebral dura and its reflections, the dural venous sinuses and their applied anatomy. Pituitary gland Temporal and infratemporal fossa. The orbit Eyeball. Nerves of the orbit, extraocular and intraocular muscles, vessels of the orbit facia(orbital and bulbar) and lacrimal Gland/sac. Parasympathetic ganglia Otic, pterygopalatine, submandibular and ciliary ganglia. The Nose the external nose and the nasal cavity. Paranasal sinuses. The oral region, the mouth, the teeth and tongue, the hard and soft palate and palatine tonsils. Hypoglossal and glossopharyngeal nerves. Salivary glands-parotid, submandibular and sublingual glands. The Ear External ear, middle ear and inner ear and vestibulocochlear nerve. Fascial planes and compartments of the next. Triangle of the neck. Suboccipital region and applied anatomy. Muscles of the neck. Neck viscera Thyroid gland and parathyroid gland, Larynx and trachea, pharynx and oesophagus. Blood vessels and lymphatic of head and neck. Cervical plexuses and cervical sympathetic ganglia and applied anatomy.

**ANA 3102 Introduction to Forensic Science: 2 Credit Units**

INTRODUCTION: History & Development of Forensic Science. Definition of forensic science,‬ Purposes of forensic science‬, Applications of Forensic Science‬ Principles of Forensic Science‬,

FIREARMS: Firearms examination, Types of firearms, Anthropology,

BIOLOGICAL PROFILING, Estimating time since death, determination of sex, determination of ancestry, determination of age at death. Determination of stature. Expert testimony. Forensic science laboratory report.

CRIME SCENE: Types of Crime Scenes, Crime Scene Investigation Team‬, Methods of Investigation: ADAPT and ARISN,‬ Documenting the Crime Scene‬, Visually Documenting the Crime Scene‬,

EVIDENCE:

**ANA 3103 Advance Embryology and Reproductive techniques: 2 Credit units**

Concepts of embryonic induction and genetic regulation. Reproductive Genetics: genetics of sex determination and sexual differentiation. Reproductive technologies. Artificial insemination. Cryo-preservation of oocyte, sperm and embryo. Invitro fertilization. Embryo transfer. Intra-cytoplasmic sperm injection .Ethical issues. Prenatal diagnosis .Pre-implantation genetic diagnosis (PGD). Genetic technologies used in PGD. Genetic causes of male and female infertility. Use of PGD and cloning in infertility. Genetic errors of human development. Teratogenesis – environmental assaults on human development.

**ANA 3104: Medical Imaging : Sonographic and Radiographic anatomy: 2 Credit units**

Definition of sonographic anatomy and Imaging. The basic principles of sonographic anatomy and Imaging. Introduction to sonography. Applications. Introduction to sonographic anatomy of the upper and lower extremities, thorax, abdomen and pelvis. Introduction to Neurosonography. sonographic anatomy of sclerous and soft tissues, ultrasound, thermography, CAT scan and magnetic resonance imaging correlated with sectional anatomy of all parts of the body.

**ANA 3105: Anatomical Laboratory Technique: 2 Credit units**

Basic museum techniques Labeling and cataloguing of museum specimens. Care and maintenance of museum specimen. Maceration. Introduction to animal house and maintenance of Laboratory animals, Methods of sacrificing experimental animals. Methods of obtaining specimen from experimental animals. The processing for microscopic studies.

**ANA 3106: Aesthetics and Cosmetology: 2 Credit Unit**

Introduction to cosmetology, Anatomy basis of Microdermabrasion, Non-Surgical Face lift and Cosmetic Electrotherapy, Facial machines and uses. Principles of electricity and electrical equipment in aesthetics. Make up design, law of color, facial shapes and features. Make up products, techniques, essentials, toning, cleansing exfoliation, infection control and safety. The different Electrical Facial-Skin Treatments and its implications, Anatomical Basis of Treatment of Neuromuscular Electrical Stimulation or Faradic electro-facial skin treatment, Effects of Neuromuscular Electrical Stimulation, Permanent makeup, Eyelash and eyelash Extensions, Anatomy And Physiology Of Skin and its appendages, Skin Pathology , Skin care and skin care products. Massage, reflexology and manual cellulite treatment. Hair growth and removal methods. Waxing essentials.

**ANA 3107: Morbid Anatomy & Funeral Practice: 2 Credit units**

Plastination, Principles of plastination. Types of Plastination. Body Worlds. Embalming, Theories and principles of embalming. Offers an intensive study of the basic fundamentals of the embalming process; covers the purpose of embalming, modes of death, signs of death, expert tests for death, post-mortem physical and chemical changes, ethics of embalming, and laws of decomposition. Introduction to Restorative art. Funeral service orientation. History and sociology of funeral service. Descriptive pathology with emphasis on the basic principles regarding the alteration of the structure and function of tissues in disease and development; and discussions on the anatomical changes resulting from diseases showing how it relates to the work of a mortician, pathologist, coroner, and medical examiner. Introduction to funeral service laws and management. Advances and current trends in Embalming and Mortuary Science.

**ANA 3108: Basic Histopathology: 2 Credit units**

Examination and Interpretation of Histological Sections. General Histopathology; Degeneration, Atrophy, Necrosis, Hyperplasia, Inflammation, Granulation, Wound Healing and Neoplasia; Systemic Pathology; cardiovascular system, respiratory system, gastrointestinal tract and liver, urinary system, nervous system.

**ANA 3109: Prosthetics & Human Biomechanics: 2 Credit units**

Introduction to Prosthetics, introductory biomechanics, Fabrication of Prosthesis, Prosthetic components, Types of Prosthetics, Prosthetic cosmesis, Upper limb Prosthetics, Lower limb Prosthetics, Knee Prosthesis and components, gait analysis, maintenance and care of prosthetics, Amputation, psychological aspects of amputation. Simple wooden and plastic designs of prosthetic applications for different levels of lower and upper extremity amputees, Casting at joints of the body. Fundamentals of human Biomechanics. Biomechanics of human movement and its importance in improvement of performance, prevention and treatment of injury, qualitative and quantitative analysis. Essentials of biomechanics: key mechanical concepts (mechanics of movement and basic units); principles for application of biomechanics. Mechanics of the musculoskeletal system: tissue loads, response of tissues to forces, biomechanics of the passive muscle-tendon unit, bone and of ligaments; mechanical characteristics of muscle, stretch shortening cycle and neuromuscular control. Application of biomechanics in sport medicine and rehabilitation: injury mechanisms, exercise specificity, equipment (prosthetics, orthotics), readiness or fitness test and injury prevention.

**THIRD YEAR SECOND SEMESTER**

**SIWES - STUDENTS INDUSTRIAL WORK EXPERIENCE**

Students at the beginning of the third year’s second semester vacation will proceed for a period of four (4) to six (6) months student industrial work experience. This could be in any of the following areas: Anatomical Pathology/Histopathology Laboratories of Teaching and General Hospitals; Biomedical Research Laboratories; Assisted Laboratory Clinics; Forensic Department of the Nigerian Police, Immigration and custom; Radiology Departments of Teaching and General Hospitals; Sports Clinic and facilities. Spars/beauty clinics and centres.

**FOURTH YEAR FIRST SEMESTER**

**ANA 4101 Neuroanatomy II -Neuroanatomy of Cerebrum, Cerebellum, the Diencephalon, Basal nuclei, Special Senses and Autonomic nervous system: 2 Credit units**

Gross anatomy of Cerebral Poles, surfaces, borders, lobes, ventricles of brains. Functional areas of cerebral cortex and white matter of cerebral hemisphere. Neurons and laminae of cerebral cortex. The diencephalons Subdivisions, nuclei and connections (Thalamus, hypothalamus, ventral thalamus, epithalamus. Basal nuclei or ganglia caudate nucleus, lentiform nucleus (Putamen and globus pallidus), Amyggdaloid nuclear complex and claustrum. The subthalamic nuclei the substantia nigra midbrain), ventral striatum and ventral palladium. Blood supply to central nervous system. Visual pathway and applied anatomy olfactory pathway and limbic system. Neuroanatomy of autonomic nervous system sympathetic and parasympathetic.

**ANA 4102 Sports Anatomy: 2 Credit units**

The basic structure of synovial joints and the factors that influence Joint mobility for optimal sports performance, Evaluation of basic skeletal and joint actions in most of the popular sport and identify, using anatomical terms, the movements performed at each major joint during sports activities; Structure and functions of the muscular system involve in sports; Anatomical basis of Sport injury rehabilitation approaches, Bandage application and Splinting techniques; effects of exercising on body systems; Anatomical basis of determination of physical performance, physical suitability tests and Sports massage, Conditioning program targeting specific muscles which should include exercises program for muscular strength, muscular endurance, and flexibility. Anatomical basis of some common injuries in sports.

**ANA 4103 Comparative Anatomy & History of Anatomy: 2 Credit units**

Animal Kingdom, Invertebrates 1, Fishes, Amphibians, Reptiles, Birds, Mammalogy, Vertebrate taxonomy, Development of bipedalism locomotor apparatus, Development of amnion, Comparative Neuroanatomy of brain, Placentation, Speech and phonation, Skull, Evolutionary theory, Comparative anatomy of vertebrate muscular system, Comparative anatomy of vertebrate skeletal system, Comparative anatomy of vertebrate gastrointestinal system, Comparative anatomy of vertebrate cardiovascular system, Comparative anatomy of vertebrate respiratory system, Comparative anatomy of vertebrate urinary system, Comparative anatomy of vertebrate reproductive system. Comparative anatomy of Mammals and Primates. Origin of Chordates .Paleoanthropology. Biology of human variations and climatic adaptations, Genetics of population. Brief and basic history of Anatomy. Men that has contributed to the development of anatomy (Herophillus, Erasistratus, Leonardo da Vinci, Andrea Vesalius, William Harvey, Fabricus, Galen etc) and their contributions, History of Anatomy in Nigeria.

**ANA 4104 Forensic Anthropology and Biometrics: 2 Credit units**

Introduction to forensic anthropology; Human Osteology and Odontology; Skeletal Examination and Documentation Methods; Sex, Stature and Ancestry Estimation; Identification, Processing and Preparing human Remains, Medicolegal Significance of forensic anthropology, Skeletal Examination and Documentation Methods, Analysis of Skeletal Trauma, Personal Identification; Introduction to Biometrics; Fingerprint Recognition; Face Recognition; Iris Recognition; Hand Geometry Recognition; Gait Recognition; The Ear as a Biometric; Voice Biometrics; A Palmprint Authentication System; Hand Vascular Pattern; The Law and the Use of Biometrics; Biometric System Security; Linkages between Biometrics and Forensic Science; Biometrics in the Government Sector; Biometrics in the Commercial Sector; Biometrics Standards; Biometrics databases.

**ANA 4105 Physical Anthropology: 2 Credit units**

Evolution and anthropology, races and physical characteristics. Genetics of population. Paleoanthropology. Social and cultural anthropology. Medical anthropology and modern schools of clinical anthropology. Anthropometry- Overview of Anthropometry, Purpose of Anthropometry-, Tools and Techniques in Anthropometry - General Methods-, Regions and Anatomical Areas of the Body- Head and Face, Limbs, Extremities and Bones, Joints and Digits, Abdominal and Trunk Regions

**ANA 4106 Research Methods and Biostatistics: 2 Credit units**

Definitions; Types of Research; Preparative stages; Literature search; Protocol Development; Sampling; Methods of acquisition of data; Basics of data processing; Report / Manuscript presentation; Human and ethical issues. Biostatistics. Measures of central tendency. Variables and Data analysis.

**ANA 4107 Anatomical Enterprise: 2 Credit Unit**

Introduction to anatomy Enterprise, Commercial anatomy, Commercial gross anatomy; Body worlds international, Areas for anatomical enterprise, Funeral home establishment, requirements (financial and technical) and procedures for establishment of a FH. Establishment of plastination laboratory, Commercial plastination, Requirements (financial and technical) for establishment of a plastination laboratory, Perspex jar for commercial, 2D anatomical illustrations, 2D illustrations for commercial, freelancing. Commercial histology; Tissue and Histological slide preparation for commercial. 3D Visualization for anatomical study, 3D anatomy for commercial; 3D printing, 3D printing techniques, 3D printing for commercial, Establishment of a 3D printing farm. Legal perspective for establishment of an anatomical enterprise. Niche and marketplace for anatomical Enterprise. Tips for running a successful anatomical business enterprise.

**FOURTH YEAR SECOND SEMESTER**

**ANA 4201 Seminar / Practicals: 3 Credit Units**

Seminar Presentations in Anatomy: Students will be trained on public seminar presentations skills and will be asked to present seminars in topics related to their undergraduate project work. Practical sessions in gross anatomy, histology, forensic science, morbid anatomy, cell biology, anatomy education, anatomical laboratory techniques, anatomical visualisation etc.

**ANA 4202 Cell and Molecular Biology: 2 Credit units**

Introduction to the Study of Cell Biology, The Chemical Basis of Life, Techniques in Cell and Molecular Biology, Cytoplasmic Membrane Systems, Interactions Between Cells and Their Environment, The Nature of the Gene and Genome, Expression of Genetic Information, Cytoskeleton and Cell Motility, Cellular Reproduction, Cell Signaling and Cancer.

**ANA 4203 Histochemistry: 2 Credit units**

History of Histochemistry, introduction and definition of histochemistry, principles and Histochemistry, Microscopy, Histochemical tissue processing. Enzyme and carbohydrate. Histochemistry. Histochemistry of lipids, proteins, amino acids and nucleic acids. Histochemistry of pigment and minerals, Quantitative Histochemistry ultra Histochemistry.

**ANA 4204 Project/ Viva Voce: 6 Credit units**

Special study of a selected topic in any area of Human Anatomy supported by Dissertation.

**ANA 4205 Forensic Anthropology Applications: 3 Credit units**

Forensic Taphonomy: Principles of forensic taphonomy, decomposition and postmortem soft tissue change, Decomposition in Aquatic Environments; postmortem skeletal changes, scavenging, estimating the postmortem interval, Forensic Archaeology and Scene Processing, Principles of forensic archaeology, detection methods, recovery methods, scene documentation, collection of skeletal evidence; Blood Degradation and Bloodstain Age Estimation, DNA Degradation: Current Knowledge and Progress in DNA Analysis, Field procedure for skeletal remains; Ethics in forensic osteology; Laboratory procedures and reporting;