**의 학 과**

**(MEDICAL SCIENCE)**

**Department Introduction**

The department of medicine is committed to training the next generation of biomedical researchers who will identify the basis of human diseases and develop the means to translate these findings into clinical applications to treat disease. The Mission of the department of medicine, as a comprehensive academic medical subject, is to educate students at the professional, graduate levels to become highly qualified health services practitioners, educators, and research scientists and to conduct research and creative activities for the advancement of knowledge through teaching and development of skills and to provide continuing education, public service, and clinical care of exemplary quality. In addition to conferring the degrees of medicine, department of medicine offers several degree programs to meet the unique interests of graduate students. The M.S. and Ph.D. graduate program offerings graduate students assume challenging positions in academia, industry, and government agencies.

**의학과**

면역학 3 credit

(IMMUNOLOGY)

The course is to understand the concepts of immune system and mechanism in health and disease.

Immune response occurring in animal body including human beings, as a protective mechanism against foreign life (invaders such as bacteria or virus), will be taught at the level of cell and molecular biological point of views.

세포분자의학 3 credit

(CELLULAR MOLECULAR MEDICAL SCIENCE)

This is a course to study the differential structure and functions of subcellular organelle including cytoplasmic membrane, cytosol, nucleus to understand the general cellular composition, metabolism, and material transport systems.

순환기학 3 credit

(CARDIOVASCULAR DISEASE)

The aim of this course is to understand the mechanisms of heart pumping and adequate circulation and its association with various circulatory diseases. Students will study various diagnostic and treatment modalities, such as ECG, catheterization, echocardiogram, angioplasty, and surgery.

신경병학 3 credit

(PATHOLOGICAL NEUROLOGY)

The disorders of the central nervous system are composed of vascular diseases, tumors, neurodegenerative diseases and others. Among them, CNS tumors are classified with various methods, and those are changing continuously. Recently the research methodology depends on molecular biology particularly. The results on the pathogenesis of both neurodegenerative diseases and brain tumors are getting increased more and more. In this neuropathology, it would be emphasized on molecular biology results of brain tumors and degenerative diseases, and then on the relationship between molecular results and patient's prognosis

신체항상성 3 credit

(HOMEOSTASIS)

Homeostasis means maintenance of nearly constant conditions in the internal environment. Essentially all organs and tissues of the body perform functions that help maintain these constant conditions. This course concerns about how each organ or tissue contributes to homeostasis.

외상학 3 credit

(TRAUMATOLOGY)

The course is designed to study wounds and injuries caused by accidents or violence to a person, and the surgical therapy and repair of the damage.

의학윤리및연구방법론 3 credit

(MEDICAL EHICS AND RESEARCH METHODOLOGY)

This is a course to strenghten student's capability to design and conduct medical research by understanding medical ethics and research metholdogy.

임상정신의학 3 credit

(CLINICAL PSYCHIATRY)

The aim of this course is to provide the graduate students with the scope, methodology and up-to-date knowlegdes of various areas in the basic neuroscience. This course will help the students have an upgraded perspective on their specialty. The subjects of this course include neuroanatomy, neurophysiology, neurochemistry, molecular biology, genetics, behavioral pharamacology and so on.

종양학 3 credit

(ONCOLOGY)

This course is designed to study the current knowledge and emerging research topics about all part of oncology. This course focused on early detection, surgery, radiation therapy and systemic therapy including chemotherapy and hormonal therapy. Finally, molecular biology and genetics of cancer also included in this lecture

호흡기학 3 credit

(PULMONOLOGY)

This subject is about overview of pulmonary anatomy and physiology, various disease states and their diagnosis and treatment modalities.

개별연구(1) 3 credit

(INDEPENDENT STUDY (1))

개별연구(2) 3 credit

(INDEPENDENT STUDY (2))

의학과세미나 1 credit

(SEMINAR)

This course is designed to study current knowledge and emerging research topics of medical sciences.

**해부학전공**

골격계해부학 3 credit

(ANATOMY OF THE SKELETAL SYSTEM)

This program will be studied human bones composing skeletal system and physical movement connected with muscles. In addition, this course will be provide learning ossification process and bone remodeling process by aging and changing precess caused by physiological or physical factor based on histological background.

면역조직화학 3 credit

(IMMUNOCYTOCHEMISTRY)

Immunocytochemistry is an experimental method that identify presence of specific component and its distribution in the cells and tissues using antigen-antibody reaction. This lecture will provide understanding the theoretical background and techniques of immunocytochemistry and their applying fields.

비뇨기계해부 3 credit

(ANATOMY OF THE URINARY SYSTEM)

Urinary system which provides the apparatus for the formation and discharge of the urine, consists of kidneys, ureters, urinary bladder, and urethra. In this lecture, the students will obtain information about the developing process, macroscopic structure, and microscopic structure of these organs. So they will understand structure of the urinary system related with functional aspect.

생물전자현미경학 3 credit

(BIOLOGICAL ELECTRON MICROSCOPY)

This lecture will provide information for the basic principles and mechanics of TEM/SEM as well as specimen preparation and manipulation of EM in the biological fields. Students will analyse the ultrastructure of organs and tissues derived from the electron micrographs and apply this information to evaluate the status of organs and tissues.

생식계해부학 3 credit

(ANATOMY OF THE REPRODUCTIVE SYSTEM)

The reproduction system is involved in oogenesis or spermatogenesis and embryo development. This lecture will be learn organ disparity between the sexes and their the gross or histological characteristics. This course will deal with the precesses of oogenesis or spermatogenesis and physical changes as well as understand histo-physiolocal changes during pregnancy.

세포사멸학 3 credit

(CELL DEATH)

This lecture deal with the mechanism of various types of cell death and discuss the molecular mechanism and morphological changes of cell death. Students will study applying cell death to therapy for chronic disease related to cell death such as cancer and neurodegerarative disorders in human.

세포조직배양학 3 credit

(CELL ＆ TISSUE CULTURE)

Cell and tissue culture is a technique that culture animal cells or tissues isolated from biopsy in vitro. Students will study methods for isolating specific cells from tissues and purifying single type cell population from the mixed cells. Also, it will be discussed the techniques for regulating culture environment,

소화기계해부 3 credit

(ANATOMY OF THE DEGETIVE SYSTEM)

The digestive system, which provides the apparatus for the digestion of fook, consists of the digestive tube and certain accessory organs: the mouth, pharynx, esophagus, stomach, intestines, canal, teeth, salivary gland, pancreas, and liver. This lecture deals with the gross anatomy, microscopic anatomy and developmental anatomy of the digestive system.

순환기계해부 3 credit

(ANATOMY OF THE CIRCULATORY SYSTEM)

Circulatory anatomy mainly studies a structure and function of vascular system. The vascular system or blood vessels consists of a closed system of tubes, which transport blood from the heart to all parts of the body and finally back to the heart

암세포생물학 3 credit

(CANCER CELL BIOLOGY)

Cancer is a multi-step disease resulting from a series of genetic and epigenetic changes that abrogate normal cellular controls. Although tremendous effort has been invested in the fight against cancer and considerable improvement has been made in therapeutic options over the past years, this disease still remains one of the major causes of death. The goal of the program is to develop within each student the approach to scientific thought founded upon basic molecular biology relevant to cancer needed for original research as an independent investigator in cancer biology.

응용신경해부학 3 credit

(APPLIED NEUROANATOMY)

Applied neuroanatomy provides the advanced neuroanatomical information required for the medical practice. The students will understand the functional organization of the nervous system and the lecture presents how injury and disease can result in neurological deficits.

인체발생학 3 credit

(HUMAN EMBRYOLOGY)

This lecture will deal with the process of gamatogenesis, embryo development after fertilization and implantation as well as study congenital anomaly that were caused during embryo development.

조직공학 3 credit

(TISSUE ENGINEERING)

Tissue engineering generally combines three key elements: scaffolds (matrics), signaling molecules (growth factors), and cells. By combining these element, regeneration of damaged tissue and restoration or improvement of organic function can often be accomplished.

조직화학 3 credit

(HISTOCHEMISTRY)

This program will deal with theoretical background and techniques for tissue slides preparation such as fixation, embedding, cutting, and staining using biopsy tissues or cultured cells. Students will study the representing methods for cell organelle or cell inclusions in microscopic level.

줄기세포치료 3 credi

(STEM CELL THERAPY)

Stem cells have ability of self renewal as well as differentiation into different cell types. The cells are in the focus of attention recently, as cell therapeutic agent improving function of damaged tissues or organs. This lecture will discuss about types and characteristics of the stem cells, effects and mechanism as cell therapeutic agent, and dimension of application.

호흡기계해부 3 credit

(ANATOMY OF THE RESPIRATORY SYSTEM)

Respiration or exchange of gaseous substance between the air and the blood stram, is brought about in the respiratory system(respiratory apparatus): the nose, nasal passages, nasopharynx, larynx, trachea, bronchi, and lungs. This lecture deals with the gross anatomy, microscopic anatomy and developmental anatomy of the respiratory system

**생리학전공**

근육생리학 3 credit

(MUSCLE PHYSIOLOGY)

This course is designed to learn the structure and function of muscle with emphasis on the differential mechanism and regulation of contraction of different types of muscle.

뇌과학 3 credit

(BRAIN SCIENCE)

This course is designed to study brain structure and function including the role of brain in homeostasis.

문제해결형생리학연구방법론

(PROBLEM BASED LEARNING IN PHYSIOLOGICAL RESEARCH)

This is a guided study course to strengthen knowledge of students in understanding functions of human organ system.

생리학토픽연구 3 credit

(PHYSIOLOGICAL TOPICS)

This course is designed to study current knowledge and emerging research topics of physiology.

생체조절기전 3 credit

(REGULATORY AND INTEGRATIVE MECHANISM)

This is an integrated course covering the mechanisms for hormonal and neural regulation of functions of all human organ system.

세포분자생리학 3 credit

(CELLULAR MOLECULAR PHYSIOLOGY)

This is an integrated course covering the mechanisms for hormonal and neural regulation of functions of all human organ system.

세포치료생리학 3 credit

(CELL THERAPY PHYSIOLOGY)

This is an overview of cell therapy including stem cell research with emphasis on recent development in therapeutic applications.

신경생리학 3 credit

(NERVOUS SYSTEM PHYSIOLOGY)

This is a course to study the structure and function of nerve system.

신약개발방법론 3 credit

(NEW DRUG RESEARCH METHODOLOGY)

This course is designed to study the basic interventional point for developing new therapeutic drug.

신장생리학 3 credit

(NERVOUS SYSTEM PHYSIOLOGY)

This is a course to study the structure and function of kidney and urinary system.

심혈관계생리학 3 credit

(CARDIOVASCULAR PHYSIOLOGY)

This course features in-depth studies of structure and function in cardiovascular system with special consideration of recent development in regulation of circulation and microcirculation.

에너지대사생리학 3 credit

(ENERGY METABOLISM PHYSIOLOGY)

This course considers mechanisms for regulation of metabolism to meet energy demands.

영양과생리학 3 credit

(NUTRITION AND PHYSIOLOGY)

This course is designed to study the relationship between nutrition and human physiology.

임상생리학 3 credit

(CLINICAL PHYSIOLOGY)

The application of the study of human physiology to clinical aspects is considered.

호흡생리학 3 credit

(RESPIRATORY PHYSIOLOGY)

This is a course to study the structure and function of respiratory system.

환경과적응 3 credit

(ENVIRONMENT AND ADAPTATION)

This course covers the mechanism of adaptation of human body to environment.

**생화학·분자생물학전공**

고급분자생물학 3 credit

(ADVANCED MOLECULAR BIOLOGY)

Detailed analysis of recent advances in the study of DNA replication genetic recombination, DNA repair, structure and function of gene in inferior cell will be covered and continue to chromatin structure and its replication,control of gene expression, somatic recombination, and oncogene in higher cell.

노화생화학 3 credit

(BIOCHEMISTRY OF AGING)

This course covers the fundamentals of molecular cell biology of aging as well as the methodological and experimental approaches upon which they are based. Topics include aging theory and mechanisms, aging models, gemonics of aging, and the regulation of aging. The techniques and logic used to address important questions in molecular cell biology of aging is emphasized. Lectures cover broad topic areas in molecular cell biology of aging and class discussions focus on representative papers recently published in the field.

단백질구조와기능 3 credit

(PROTEIN STRUCTURE AND FUNCTION)

Knowledge of protein structure and function is essential for understanding life. This course will cover topics on amino acid sequence to structure, structure-function relationship, regulation of protein function, sequence to function: case studies in structural and functional genomics, and structure determination.

대사와질환 3 credit

(METABOLISM AND DISEASE)

This course covers the fundamentals of metabolism as well as the methodological and experimental approaches upon which they are based. Topics include metabolism of carbohydrates, lipids, proteins, and nucleic acids as well as bichemical basis of metabolic diseases. The techniques and logic used to address important problems in metabolism and disease is emphasized. Lectures cover broad topic areas in metabolism and disease and class discussions focus on representative papers recently published in the field.

분자생물학 3 credit

(MOLECULAR BIOLOGY)

One of the newest and most revolutionary areas of laboratory medicine, diagnostic molecular genetics holds promise of becoming the most powerful diagonstic and screening tool of the 21st century. With rapid accerelating pace of discovery of new disease genes under the auspices of the Human Genome Project and recognition the virtually all disease, including genetic, neoplastic and even infectious ones, have some genetic component, the utility of this subspeciality can only continue to expand.

분자의학 3 credit

(MOLECULAR MEDICINE)

This course covers the molecular bases of disease and the methodological and experimental approaches upon which they are based. Topics include the techniques and logic used to address the molecular bases of cardiovascular disease, diabetes, cancer, neurological disease, immunological disease, or any other. Lectures cover broad topic areas in molecular medicine and class discussions focus on representative papers recently published in the field.

산화환원생화학 3 credit

(REDOX BIOCHEMISTRY)

The tightly controlled maintenance of intracellular reduction-oxidation (redox) status is essential for normal cellular function. This course will focus on antioxidant molecules and redox cofactors, antioxidant enzymes and their roles, redox regulation of physiological processes such as cellular signaling and apoptosis, and pathological processes related to redox including aging and vascular diseases.

생화학분자생물학세미나(1) 3 credit

(BIOCHEMISTRY AND MOLECULAR BIOLOGY SEMINAR I)

This course is for learning the theological background of the biochemical and molecular biological experimental methods such as DNA and RNA purification, Southern hybridization, Northern hybridization, and polymerase chain reaction. Lectures cover broad topic areas in techniques in Biochemistry and Molecular Biology and class discussions focus on representative papers recently published in the field.

생화학분자생물학세미나(2) 3 credit

(BIOCHEMISTRY AND MOLECULAR BIOLOGY SEMINAR II)

This course is for learning the theological background of the biochemical and molecular biological experimental methods such as protein purification, sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), isoelectric focusing, Western blot analysis, enzyme assay, confocal microscopy, flow cytometry and ELISA. Lectures cover broad topic areas in techniques in Biochemistry and Molecular Biology and class discussions focus on representative papers recently published in the field.

생화학연구방법론(1) 3 credit

(TECHNIQUES IN BIOCHEMISTRY AND MOLECULAR BIOLOGY I)

생화학연구방법론(2) 3 credit

(TECHNIQUES IN BIOCHEMISTRY AND MOLECULAR BIOLOGY II)

세포신호전달 3 credit

(CELLULAR SIGNALING)

As a general course for first-year graduate students, hormone, neurotransmitter, principles of cellular response regulation affected by extracellular environmental change, receptor, switch, amplification system, component parts of molecular network and its function will be studied. Cell growth, apoptosis, cell differentiation, cell development and its effects on various forms of signal transduction molecules will be lectured wide and specifically.

암분자생물학 3 credit

(MOLECULAR BIOLOGY FOR CANCER)

연구과제작성법 3 credit

(SCIENTIFIC WRITING)

Scientific writing for a research paper or a grant proposal is essential and important. This course aims at learning how to write a winning grant proposal. The students are asked to write a research proposal in the style of an external grant application. The topic must be different from their advisor's and their own research area.

염증면역생화학 3 credit

(BIOCHEMISTRY OF INFLAMMATION AND IMMUNITY)

This course covers the fundamentals of inflammation-related immune response as well as the methodological and experimental approaches upon which they are based. Topics include classification and functions of immune cells, structures and functions of receptors for immune responses. Moreover, the mechanism of foreign substances involved in the immune response will be focused and studied.

오믹스학 3 credit

(OMICS)

In biology, the suffix -omics generally refers to the study of a complete group or system of biomolecules. This course covers the fundamentals of -omics as well as the methodological and experimental approaches upon which they are based. Topics include genomics, proteomics, lipidomics, transcriptomics, and metabolomics. Lectures cover broad topic areas the causative agents, treatment, and application in diseases and class discussions focus on representative papers recently published in the field.

의학생화학 3 credit

(MEDICAL BILCHEMISTRY)

This course studies the recent knowledge of the biochemical and molecular biological background of disease developments and diagnosis. Topics focus on the biochemical basis of structure and functions of biomolecules, metabolism, and gene expression in diseases such as cardiovascular diseases, obesity, atherosclerosis, neurologic diseases and degenerative diseases.

지질생화학 3 credit

(LIPID BIOCHEMISTRY)

Lipid Biochemistry deals with fundamentals and concepts in lipid including methodology used in the analysis of lipids. This course includes fatty acid structure and metabolism, lipids as energy stores, lipid transport, lipids in cellular structures, and metabolism of structural lipids. Lectures cover specific topic areas in lipid-related diseases and class discussions focus on representative papers recently published in the field.

핵세포분자생물학 3 credit

(MOLECULAR CELL BIOLOGY OF THE NUCLEUS)

This course covers the fundamentals of molecular cell biology of the nucleus as well as the methodological and experimental approaches upon which they are based. Topics include eukaryotic nuclear structure and function, genome structure, function and expression, processing of RNA, and regulation of the cell cycle. The techniques and logic used to address important problems in molecular cell biology of the nucleus is emphasized. Lectures cover broad topic areas in nuclear cell biology and class discussions focus on representative papers recently published in the field.

효소학 3 credit

(ENZYMOLOGY)

**미생물학전공**

감염과백신 3 credit

(INFECTION AND VACCINES)

Discovery of antibiotics allowed us fantastic treatments against many bacterial infections. However, vaccination is preferred for the prevention of viral infections and some bacterial infections. Due to the development of biotechnology, the concept of the vaccine has been changing nowadays. This subject deals with the new concept and technology of vaccine development and up-to-date vaccines for microbial infections.

감염면역 3 credit

(INFECTION AND IMMUNITY)

The basic mechanisms of antimicrobial immunity are reviewed, and the main features of immunity to different types of pathogenic microorganisms are discussed in more detail, and the topics of microbial pathogenesis and the related antimicrobial immunity are provided.

골면역학 3 credit

(OSTEOIMMUNOLOGY)

Bone is the only solid tissue in the human body. As a living and dynamic tissue, bone is remodeled by a delicate balance between bone-forming osteoblasts and bone-resorbing osteoclasts. Recently, it has been reported that various factors produced during immune responses are capable of profoundly affecting regulation of bone. Thus, the final goal of this subject is to investigate the inter-relationship between the bone and the immune system.

미생물생리 3 credit

(MICROBIAL PHYSIOLOGY)

Microbial physiology deals with knowledges about normal microbial metabolism, regulations that respond to extracellular stimuli, and their relationships with infectious diseases. And also study about gene regulatory group such as stimulation, regulation, operon and adaptation process of microorganisms against environment.

미생물유전학 3 credit

(GENETICS OF MICROORGANISM)

To understand important milestones of microbial genetics and the flows to the current complex life sciences. To understand small genome projects and to understand the application processes for structure-based drug design and live attenuated vaccine development via virulence gene knock-out. To obtain knowledges about the genetic regulation of pathogenic factors during infectious disease state by pathogenic microbes.

바이러스와면역조절 3 credit

(VIRUS AND IMMUNE REGULATION)

Human immune system responds to viral infection. Interferons constitute the earliest immune response against viral infection. They elicit antiviral effects as well as multiple biological responses involved in cell growth regulation and immune activation. Because the interferon-induced cellular antiviral response is the primary defense mechanism against viral infection, many viruses have evolved strategies to antagonize the inhibitory effects of interferon. There are several kinds of viral proteins that involve the cellular immune regulation machinery such as ORF45 and vIRF of Kaposi's sarcoma-associated herpesvirus or vIL-10 of Epstein-Barr virus (a homologue of IL-10). They block virus-mediated induction of type I interferon. In this subject, student study not only the mechanisms of viral immune induction but also viral immune evasion.

바이오신약의외래성미생물검사 3 credit

(ADVENTITIOUS AGENTS TEST FOR BIO-PHARMACEUTICALS)

Recently, novel concept-based bio-pharmaceuticals, such as recombinant protein therapeutics, gene therapeutics, cellular therapeutics have developed along with the progress of bio-engineering technique. These bio-pharmaceuticals are manufactured by using cells originated from various species and free from the contamination of microorganism is a big issue for the safety of drug. Therefore, appropriate tests are required for the approval of new bio-pharmaceuticals. This subject deal with not only the concept of bio-pharmaceuticals, types of adventitious virus and tests for those viruses but also the guideline for the regulation of adventitious virus in US, EU and Korea.

발효미생물학 3 credit

(FERMENTATION MICROBIOLOGY)

Microorganisms have dual effects as the benefit and harmful to human health, resulting in a process of microbial fermentation. This subject will be placed on titles dealing with microbial fermented products, intrinsic and extrinsic parameters of foods affecting microbial survival and growth, incidence and types of food microorganisms, food spoilage, microbiological aspects of food preservation, microbial interaction, food-borne diseases of microbial origin and the safety of novel food products.

사이토카인 3 credit

(CYTOKINE)

An understanding of cytokine is essential for the immunology and for medical student, researcher, teacher and practitioner who needs to understand immunological disease and approaches to therapy. Cytokine research is expected to provide the key to pharmacological manipulation of the immune response and commands the attention of a massive and highly focused biotechnology industry. The aim of this subject is to inform and provide basic knowledges and detailed information on the many aspects of cytokine science.

세포미생물학 3 credit

(CELLULAR MICROBIOLOGY)

To obtain the knowledges about the interactions between microbes and host cells and important mechanisms involved in infectious diseases. To understand the defense mechanisms of host cells and to obtain the knowledges about microbial factors that affect host cell functions and signal transduction pathway. To understand the application fields of the microbial factors for development of vaccines and various drugs based on these knowledges.

신흥감염병학 3 credit

(EMERGING INFECTIOUS DISEASE)

As the twenty-first century begins it becomes increasingly apparent that the twentieth century, which opened with the promise of the eradication of most infectious diseases, closed with the specter of the reemergence of many deadly infectious diseases that have a rapidly increasing incidence and geographic range. Appearance of new infectious diseases that have become major sources of morbidity and mortality is alarming. Therefore the main features of emerging infectious diseases to different types of pathogenic microorganisms are discussed in more detail, and the topics of microbial pathogenesis and the related defense mechanisms are provided.

유전자조절과암 3 credit

(GENE REGULATION AND CANCER)

To obtain knowledges about tumor suppressor genes, oncogenes, and carcinogenesis induced by structural and functional abnormalities of these genes. To understand the action mechanism of tumor suppressor genes and their importances during the carcinogenesis. To obtain knowledges about normal functions of oncogenes.

**예방의학교실**

반복측정자료분석학 3 credit

(ANALYSIS OF LONGITUDINAL DATA)

Covers statistical models for drawing scientific inferences from longitudinal study design; exploring longitudinal data; Linear and generalized linear regression models for correlated data, including marginal, random effects, and transition models; and handling missing data. Intended for doctoral students in quantitative sciences. Student evaluation based on analysis of a longitudinal data set, presentation of the results, and a written scientific report of the analysis methods and results.

병원관리론 3 credit

(TOPICS IN HOSPITAL MANAGEMENT)

보건경제학 3 credit

(HEALTH ECONOMICS)

보건교육및건강증진 3 credit

(HEALTH EDUCATION AND HEALTH PROMOTION)

보건통계학 3 credit

(HEALTH STATISTICS)

산업역학 3 credit

(OCCUPATIONAL EPIDEMIOLOGY)

산업의학 3 credit

(OCCUPATIONAL MEDICINE)

산업중독학 3 credit

(OCCUPATIONAL TOXICOLOGY)

암역학 3 credit

(CANCER EPIDEMIOLOGY)

Emphasizes the role of epidemiology in cancer prevention and control. Introduces mechanisms of carcinogenesis. Discusses the influence of selected genetic and environmental factors on the risk of cancer, together with the epidemiologic issues involved in their investigation. Also covers principles and problems involved in cancer screening and approaches to primary prevention of cancer, including cancer prevention trials. Student evaluation based on discussions and papers.

역학개론 3 credit

(PRINCIPLES OF EPIDEMIOLOGY)

유전역학 3 credit

(GENETIC EPIDEMIOLOGY)

Lectures and discussion of recent literature illustrate different methodological approaches for analyzing familial aggregation of heart disease, cancer, respiratory diseases, and other common diseases. Discusses the difficulties in detecting genetic and environmental sources of familial aggregation and emphasizes the interpretation of the analytical methods and their significance. Student evaluation based on class discussions and written critiques of selected articles.

의료관리학 3 credit

(HEALTH SERVICE ADMINISTRATION)

This lecture introduces the relationship between health, illness and society, inequality of health by social class, patients-doctor relationship, medical profession, and the current issue and discusses problems of contemporary medical vare system. The evaluation of the students based on discussions and papers.

의료보장론 3 credit

(SOCIAL SECURITY FOR MEDICAL CARE)

의료사회학 3 credit

(MEDICAL SOCIOLOGY)

This lecture introduces the relationship between health, illness and society, inequality of health by social class, patients-doctor relationship, medical profession, and the current issue and discusses problems of contemporary medical vare system. The evaluation of the students based on discussions and papers.

의료정보학 3 credit

(MEDICAL INFORMATICS)

의료제도론 3 credit

(COMPARATIVE HEALTH SYSTEM)

This course is make to students to understand the national health care system of various countries and compare the characteristics of the systems and analysis of crucial issues in health care; manpower policy, economic support, health facilities, patterns of health service delivery, regulation, planning, and other aspects of health care systems probed in settings of European welfare states, developing nations, and socialist countries.

임상역학 3 credit

(CLINICAL EPIDEMIOLOGY)

지역사회의학 3 credit

(COMMUNITY MEDICINE)

직업병관리 3 credit

(CONTROL OF OCCUPATIONAL DISEASE)

질병관리론 3 credit

(COMMUNICABLE AND CHRONIC DISEASE CONTROL)

환경보건학개론 3 credit

(PRINCIPLES OF ENVIRONMENTAL HEALTH)

**병리학전공**

골연부조직병리 3 credit

(PATHOLOGY OF BONE & SOFT TISSUE)

Non-neoplastic diseases and neoplasms arising in bone and soft tissue are introduced in the pathology of bone and soft tissue. Non-neoplastic deseases arising in the bones include developmental abnormalities, osteoporosis, ostepetrosis, reckets, osteomalacia, fractures, avascular necrosis and osteomyelitis. Diseases arising in the joints include degenerative joint desease, rheumatoid arthritis and gout. Bone tumors include bone-forming tumors, cartilage-forming tumors, giant cell tumor, gematopoietic tumors, fibrohistiocytic tumor and others. Soft tissue tumors include lipoma, liposarcoma, fibroma, fibromatosis, fibrosarcoma benign fibrous histiocytoma, malignant fibrous histiocytoma, rhabdmyoma, rhabdomyosarcoma, leiomyoma, leiomyosarcoma, synovial sarcoma and others.

면역병리학 3 credit

(IMMUNOPATHOLOGY)

Immunopathology deals with immune system and immune responses associated with disease such as hypersensitivity reaction, autoimmune diseases, transplant rejection and acquired immune deficieny syndrome.

발육장애 3 credit

(GROWTH DISTURBANCE)

Growth is the process of increase in size and mass resulting from the synthesis of specific tissue components. There are several diseases involving abnormalities of tissue growth. These vary from congenital defects in organ development, to neoplasia. This chapter would deal with developmental abnormalities, atrophy, hypertrophy, hyperplasia, metaplasia or dysplasia.

법의학 3 credit

(FORENSIC MEDICINE)

Forensic medicine applies medical knowledge to criminal and civil law. Autopsy (post-mortem examination) is often used to determine the cause of death and can determine not only the immediate agent of death, but may also yield important contextual information, such as how long the person has been dead, which can help trace the killing. Modern techniques have been applying by using such specimens as blood, stomach contents, urine and hair samples from cadavers. This course can integrate the medical knowledge and post-mortem findings.

부인과병리 3 credit

(GYNECOLOGIC PATHOLOGY)

Gynecologic pathology is dealing with disease of the female genital tract including the cervix, vagina, vulva, endometrium, uterus, fallopian tube, and ovaries. This area also includes diseases of the placenta.

비뇨생식계병리 3 credit

(GENITOURINARY PATHOLOGY)

Genitourinary pathology consists of the disorders of kidney, ureter, urinary bladder, testis, epididymis and prostate. Especially the classification and grading system of renal and prostatic carcinomas are up-dating continuously. These tumors are also increasing in frequancy among Korean male. In this course, other malignant benign tumors are also included. Also it would be introduced on particular neoplasms an immunohistochemial analysis and molecular biology.

소화기병리 3 credit

(PATHOLOGY OF DIGESTIVE SYSTEM)

The digestive system consists of esophagus, gastro-intestine, liver, biliary system, and pancreas. You will learn general pathology about congenital disease, non-neoplastic disease, benign tumor, and malignant tumor arising in digestive system. It would deal with carcinogenesis or pathogenesis of each disease. And it would be introduced the newest classification, molecular research results, and prognostic factor.

신경병리 3 credit

(NEUROPATHOLOGY)

The disorders of the central nervous system are composed of vascular diseases, tumors, neurodegenerative deseases and others. Among them, CNS tumors are classified wihe various methods, and those are changing continuously. Recently the research methodology depends on molecular biology particularly. The results on the pathogenesis of both neurodegenerative diseases and brain tumors are getting increased more and more. In this neuropathology, it would be emphasized on molecular biology results of brain tumors and degenerative deseases, and then on the relationship between molecular results and patient's prognosis

신장병리 3 credit

(PATHOLOGY OF KIDNEY)

Kidney pathology is a subspecialty of anatomic pathology that deals with the diagnosis and characterization of medical diseases as well as tumor of the kidneys. This course will make close relationship between pathology work and clinical fields, i.e. nephrologists and transplant surgeons as well as urologists, who typically obtain diagnostic specimens. The objectives of this course synthesize findings from light microscopy, electron microscopy, and immunofluorescence to obtain a definitive diagnosis.

심맥관병리 3 credit

(PATHOLOGY OF CARDIOVASCULAR SYSTEM)

This session deals with pathophysiology of cardiac diseases (congenital, ischemic, hypertensive and vavular heart diseases and cardiomyopathies) and vascular diseases (atherosclerosis, aneurysm, vasculitis and tumors).

염증의병리 3 credit

(PATHOLOGY OF INFLAMMATION)

This session deals with mechanism of inflammation, morphologic patterns and outcomes of acute and chronic inflammation, mediators of inflammation, systemic effect of inflammation and pathologic conditions resulting from defective or excessive inflammation.

외과병리 3 credit

(SURGICAL PATHOLOGY)

Surgical pathology laboratory processes all tissues removed for diagnostic and/or therapeutic purposes from patients. In this class, students can learn the clinical role of the pathologist and understand the clinical manifestations and natural history of pathological processes. For accurate diagnosis and appropriate treatment, ancillary tests, such as special stain, immunohistochemistry, and molecular diagnostic tests are generally used.Intraoperative diagnostic service will be introduced.

유방병리 3 credit

(BREAST PATHOLGOY)

In Korea, incidence of breast cancer is increasing in recent days. It is due to both increased availability of screening mammogram and westernized lifestyle of Korean women. Breast pathology deals with pathogenesis of breast carcinoma and precancerous lesions and histologic features of breast disease. Molecular markers influencing patients prognisis and response to adjuvant treatment will be discussed. Evaluation of Her2 by silver in situ hybridization(SISH) is also introduced.

조혈기병리 3 credit

(PATHOLOGY OF HEMATOPOIETIC SYSTEM)

Pathology of hematopoiectic system consists of bone marrow, lymph node, spleen. It would deal with 1) normal structure and function, 2) hereditary disorder, 3) lymphoproliferative disease, benign to malignant lymphoma/leukemia, 4) myeloproliferative disorder, 5) plasma cell disorder, 6) Histiocytic disorder, including dendritic cell neoplam and 7) secondary neoplasm. The classification of lymphoma is continuously up-to dating and it would be introduced.

종양학 3 credit

(ONCOLOGY)

This session deals with a variety aspects of cancer, including nomenclature, histologic features of benign and malignant neoplasms, epidemiology, molecular basis of cancer, tumor immunity and clinical aspect of neoplasia (grading, laboratory diagnosis of cancer).

진단세포학 3 credit

(DIAGNOSTIC CYTOLOGY)

The overall objective is to provide a thorough grounding in cytopathology, including diagnostic cytology, cytologic technique, and laboratory operations and procedures. Students are able to 1) identify the various cell types occurring in gynecologic smears and to understand their significance for hormonal cytology as well as the changes caused by inflammatory conditions 2) recognize non-malignant and malignant conditions in extragential materials, such as effusions, urines, sputums, bronchial washings, and

spinal fluid. 3) learn the techniques of fine needle aspiration cytology.

호흡기병리 3 credit

(PULMONARY PATHOLOGY)

Pulmonary pathology is the subspecialty which deals with the diagnosis of neoplastic and non-neoplastic diseases of the lungs and thoracic pleura. Immunohistochemistry and molecular techniques for lung cancer will be introduced.

**약리학전공**

기생충감염의화학요법 3 credit

(CHEMTHERAPY OF PARASITIC INFECTIONS)

The mechanism of actions of chemotherapeutic agents to treat infections by protozoa, nematoda, cestoda, trematoda are studied. The clinical aspects of side effects, and considerations related the physiological and pathological status of a patient, and inter-relationship with other therapeutic agents are investigated.

내분비계약리학 3 credit

(PHARMACOLOGY OF ENDOCRINE FUNCTIONS)

Students understand the physiological functions of hormones, local hormones and autacoids. The therapeutic uses, the adverse effects, and the interactions with their adjunctive therapeutics of their derivatives and antagonists are investigated.

심혈관계약리학 3 credit

(PHARMACOLOGY OF CARDIOVASCULAR SYSTEM)

Students understand the pharmacological actions, the mechanisms of actions and the pharmacokinetic properties of drugs affecting the cardiovascular system. The therapeutic utilities and adverse effects of drugs for the treatments for the diseases related with cardiac motility and vascular contractility are considered.

면역약리학 3 credit

(PHARMACOLOGY OF LMMUNE SYSTEM)

The mechanism of actions of drugs affecting the immune functions enhancing or suppressing the immunity are studied. The clinical aspects of side effects, and considerations related the physiological and pathological status of a patient, and inter-relationship with other therapeutic agents are investigated.

바이러스감염의화학요법 3 credit

(CHEMTHERAPY OF VIRAL INFECTIONS)

The students understand the mechanisms of actions of antiviral drugs that are used for the treatments of various viral infections including AIDS. Adverse effects of antiviral drugs especially on the immune system are investigated. The interactions with other therapeutic agents and the usage of antiviral agents at specific conditions of patients are considered.

분자약리학 3 credit

(MOLECULAR PHARMACOLOGY)

The students establish the fundamental knowledge of the linkage of gene expressions and physiological functions of body. The mechanisms of actions of drugs used to treat the diseases by gene abnormalities are investigated. The students are instructed with the methodology and technologies of gene therapy and the experiments of molecular pharmacology.

비뇨생식기계약리학 3 credit

(PHARMACOLOGY OF GENITOURINARY SYSTEM)

The students understand the pharmacological effects, the mechanisms of actions, and adverse effects of drugs affecting physiological functions of genitourinary organs. The drugs affecting sexual function of mail external genitalia and the drugs affecting uterine functions are investigated.

생물독성학 3 credit

(PHARMACOLOGY OF BIOLOGICAL TOXINS)

The students understand the chemical and toxicological properties of various toxins produced by microorganisms, molusca, arthropods including insects, fishes, amphibia, reptiles, etc. They also investigate not only the antidotes but also the way of clinical utilities of those toxins.

세균감염의화학요법 3 credit

(CHEMTHERAPY OF BACTERIAL INFECTIONS)

The mechanism of actions of chemotherapeutic agents to treat infections by microorganisms of chlamydia, rickettsia and bateria are studied. The clinical aspects of side effects, and considerations related the physiological and pathological status of a patient, and inter-relationship with other therapeutic agents are investigated.

실험약리학 3 credit

(EXPERIMENTAL PHARMACOLOGY)

The students understand the principles of operations of experimental instruments for the biochemical experiments and the instruments for the experiments with isolated organs or tissues. They also understand the physiological characteristics of various experimental animals, and establish the basic knowledge for the feeding and breeding of the animals. The methodology of design and execution of experiments and the statistical evaluation of data are considered.

약력학 3 credit

(PHARMACODYNAMICS)

Mechanisms of actions of drugs on physiological and pathological functions of body are investigated on the basis of chemical structures of the drugs and receptors. The students works with a methematical medelling of the relationship between drug actions and drug concentrations at the site of action.

약물동태학 3 credit

(PHARMACOKINETICS)

Drug absorption, distribution, metabolism and excretion in a body is investigated. On the basis of biochemistry, enzymology and the principles of physicochemistry, students understand the mechanism of membrane transportaion and bioavailability of drugs. On the basis of drug metabolim by hepatic enzymes and the excretion through kidney, students learn the methematical description of the time course of a drug through the body.

약물상호작용 3 credit

(DRUG INTERACTION)

Drugs in a same body may influence each other. In a physiological or a pathological state, the interaction of drugs is affects body physiology or the course of disease seriously. The students investigate the clinical aspects and pharmacokinetic aspects of drug interactions.

약물의오남용 3 credit

(DRUG ABUSE)

Students understand the physical and mental mechanisms of a drug abuse and/or an inhabitation or an addiction. The drugs having properties of physical or mental dependence are investigated at the view points of pharmacological treatments of addictions or removal of dependencies.

위장계약리학 3 credit

(PHARMACOLOGY OF GASTROINTESTINAL TRACT)

The students understand the structure and physiological function of gastrointestinal tract from esophagus to rectum, the regulatory function of enteric nervous system. The pharmacological actions of the derivatives and antagonists of the enteric neurotransmitters and gastrointestinal local hormones are investigated.

임상약리학 3 credit

(CLINICAL PHARMACILOGY)

Students establish the fundamental ability of total planning of pharmacological treatment for a patient according to the general conditions and other therapeutic implications. The relationships between the chemical properties and biological availabilities of drugs, between the physical conditions of patients and pharmacokinetic properties of drugs, and between the disease states and drug metabolism or distribution are investigated.

자율신경계약리학 3 credit

(PHARMACOLOGY OF AUTONOMIC NERVOUS SYSTEM)

General physiology, neuronal transmisssions of nerve impulses, and biochemical responses to/of neurotransmitters in sympathetic, parasympathetic and enteric nervous systems are investigated. Effects and mechanism of actions of drugs affecting autonomic nervous functions in various peripheral organs and tissues are investigated.

중추신경계약리학 3 credit

(PHARMACOLOGY OF CENTRAL NERVOUS SYSTEM)

Students understand the physiological functions of central nervous system, and investigate the effects and mechanisms of actions of drugs affecting central nervous system. The clinical aspects of using sedative-hypnotic drugs, stimulants and anesthetics especially at the view point of adverse effects are considered.

환경독성학 3 credit

(ENVIRONMENTAL TOXICOLOGY)

The students understand the toxicities and the biological mechanisms of the toxicities of various pollutants in water, atmosphere, and in various industrial products and wastes. The pharmacological treatments or preventions of those intoxications are investigated.

신생물의화학요법 3 credit

(Chemtherapy of Neoplasm)

Students understand the fundamental mechanisms of actions of various antineoplastic drugs used for solid tumors and hematological neoplasms. Adverse effects of antineoplastic drugs especially on the hematopoietic and immune systems are investigated. The interactions with other therapeutic agents at specific conditions of patients are considered.

**내과학전공**

간장학 3 credit

(HEPATOLOGY)

감염학 3 credit

(INFECTIOUS DISEASE)

The course deals with the diagnosis treatment, and prevention of the various human infectious diseases through understanding of the etiopathogenesis, transmission, and clinical manifestations of these diseases.

갑상선학 3 credit

(LECTURE ON THYROID DISEASE)

결핵학 3 credit

(STUDIES ON TUBERCULOSIS)

당뇨병학 3 credit

(LECTURE ON DIABETES MELLITUS)

류마티스학 3 credit

(RHEUMATOLOGY)

Rheumatology, a bronch of medicine, deals with rheumatic diseases which are characteriged by inflammation and pain in muscles or joints from various cause

부정맥학 3 credit

(CARDIAC ARRHYTHMIA)

사구체신장염 3 credit

(GLOMERULOPATHY)

산·염기·전해질평형 3 credit

(ACID-BASE, ELECTROLYTE BALANCE ＆ PRINCIPLES OF FLUID THERAPY)

소화기내시경학 3 credit

(ENDOSCOPY)

소화기학 3 credit

(GASTROENTEROLOGY)

신대체요법 3 credit

(RENAL REPLACEMENT THERAPY)

The objectives of this lecture are precise understanding of the meaning of renal replacement therapy in chronic renal failure(CRF). To understand the beneficial effect of each methods among hemodialysis, peritoneal dialysis and renal transplantation on survival and quality of life in CRF patients, we have to know the characteristics of each methods. Also we have to know the meaning of the integrated renal replacement therapy in CRF.

심장질환의약물요법 3 credit

(CARDIAC DRUG THERAPY)

심전도학 3 credit

(ELECTROCARDIOGRAPHY)

심초음파학 3 credit

(ECHOCARDIOGRAPHY)

인공호흡법특론 3 credit

(ADVANCED STUDIES ON ARTIFICIAL VENTRILATIONS)

임상내분비학 3 credit

(CLINICAL ENDOCRINOLOGY)

투석요법및신장이식 3 credit

(DIALYSIS ＆ KIDNEY TRANSPLANTATION)

폐기능검사특론 3 credit

(ADVANCED STUDIES ON PULMONARY)

혈액종양학총론 3 credit

(GENERAL PRINCIPLES IN HEMATO-ONCOLOGY)

호흡기학개론 3 credit

(STUDIES ON GENERAL PULMONOLOGY)

**외과학전공**

간외과학 3 credit

(HEPATIC SURGERY)

Most of the progress in hepatic surgery has occurred in the last three decade. These days, we have a rapidly growing knowledge base about recently developed diagnostic and therapeutic techniques abut liver diseases.

Hepatic surgery focuses on various partial hepatic resection techniques depending on liver anatomy and physiology as well as treatment principle and outcome for intrahepatic dust stone, hepatocellular carcinoma, cholagiocellular carcinoma and metastatic liver cancer etc. and also dealing wiht liver transplantation for irreversible end stage liver diseases.

내분비외과학 3 credit

(ENDOCRINE SURGERY)

담도외과학 3 credit

(BILIARY SURGERY)

The operative management of extrahepatic biliary diseases has developed since late 19th century. Recently, we have plenty of knowledge about anatomy and pathophysiology of various extrahepatic biliary tract diseases and also have a variety of diagnostic and nonopertive thearpeutic modalities.

Biliary surgery focuses on new treatment strategies(open surgery, laparoscopic surgery and many nonsurgical interventions) as well as treatment outcome and pitfalls for extrahepictic biliary malignancy, choledochal cyst and gall stone etc.

대장항문외과학 3 credit

(COLORECTAL SURGERY)

Recently, the population of colorectal maignancy increased more than any other malignancies because of developed environment in korea. Surgery is main stem in treament. Further, highly sophisticated surgical technique and adjuvant therapy increased cure rate. However, the general outcomes of the treatment is not changed dramatically. On this subject we are looking forward to discuss about new achievements and treatment modality of colorectal cancel

두경부외과학 3 credit

(HEAD ＆ NECK SURGERY)

복강경외과학 3 credit

(LAPAROSCOPIC SURGERY)

Since the first laparoscopic cholecystectomy in 1985, there has been tremendous academin as well as industrial expansion in the area of laparoscopic surgery. Laparoscopic surgery requires a different set of skills compared with open surgery, and knowledge about physiologic change during laparoscopic procedure under CO2 pnemoperitoneum.

Here, laparoscopic surgery focuses on the field of laparoscopic surgery, benefits and pitfalls of laparoscopic surgery, physiologic changes induced by pneumoperitoneum and finally, we are going to discuss the future of this minimally invasive surgery

소아외과학 3 credit

(PEDIATRIC SURGERY)

Pediatric age group is a unique surgical patient who is physically and physiologically diffent fro an adult. Because of small size, limited volume capacities, and functional immaturity of organ systems, an infant's response to and ability to cope with the stress related to a serious illness and major operative procedure may be marginal.

A neonate presents a significant challenge in patient care management, involving both congenital such as neonatal alimentary tract obstruction and acquired conditions.

쇼크 3 credit

(SHOCK)

외과영양학 3 credit

(SURGICAL NUTRITION)

위장관종양학 3 credit

(ONCOLOGY OF GASTRO INTESTINAL TRACT)

유방종양학 3 credit

(BREAST ONCOLOGY)

The 2nd high incidence of breast cancer in Korean women and its common occrrence in their early and middle years made it a topic of great interest, promotion intensive efforts in clinical, translation, and basic research.

The breast oncology focused on early detection, surgery. radiation therapy and systemic therapy including chemotherapy and hormonal therapy.

Finally, molecular biology and genetics of cancer also included in this lecture

이식면역학 3 credit

(TRANSPLANTATION IMMUNOLOGY)

장기이식학 3 credit

(ORGAN TRANSPLANTATION)

직장항문생리학 3 credit

(ANORECTAL PHYSIOLOGY)

Defecation difficulty develops from the course of senility or false defecation behavior. Even if it has no relationship with the life itself but, strong relationship with the quality of life. In this category two main causes of constipation are colonic inertia and pelvic outlet obstruction. The study about pelvic outlet obstruction, called as anorectal functional disorder, developed dramatically in recent two decades. Surgical treatment resulted in good outcome in this field. A lecture about this problem will be held in neat future

췌장외과학 3 credit

(PANCREATIC SURGERY)

Recently, we have plenty of knowledge about pathophysiology of various pancreatic diseases as well as new diagnostic and treatment modalities.

Here in pancreatic surgery, we are dealing with new diagnostic modalities to differentiate the diseases and treatment principles or strategies with the results and pitfalls for the pancreatic malignancy, pancreatitis, cystic diseases and various kinds of endocrine pancreatic neoplasm, etc.

혈관외과학 3 credit

(VASCULAR SURGERY)

혈관외상학 3 credit

(VASCULAR TRAUMA)

**정형외과학전공**

고관절외과학 3 credit

(SURGERY OF THE HIP JOINT)

This course is designed to learn the pathophysiology and surgical treatments of the hip joint diseases.

골·관절해부학 3 credit

(ANATOMY OF BONE AND JOINT)

This course is designed to learn the general anatomical terms for various features of bones and joints and explain the functional significance of each.

골및연부조직종양학 3 credit

(MUSCULOSKELETAL TUMOR)

This course is designed to learn the characteristics, diagnosis and surgical treatment of various musculoskeletal tumors which can occur in the muscles, nerves or the bones of the limbs.

골절및탈구치료학 3 credit

(ORTHOPAEDIC TRAUMATOLOGY, FRACTURES AND DISLOCATION)

This course is designed to learn the classification, characteristics, diagnosis, and treatment of various fractures and dislocations which occur by various traumas.

골절치료학 3 credit

(TREATMENT OF FRACTURE)

This course is designed to learn the classification, characteristics, diagnosis, and treatment of various fractures which occur by various traumas.

골종양학 3 credit

(BONE TUMOR)

This course is designed to learn the characteristics, diagnosis, and surgical treatment of various bone tumors which can occur in the bones of the limbs.

관절의생체역학 3 credit

(BIOMECHANICS OF JOINT)

This course is designed to learn the basic structures, functions, and biomechanics of the various joints.

관절치환술 3 credit

(JOINT ARTHROPLASTY)

This course is designed to learn the operative procedures of orthopedic surgery performed, in which the arthritic or dysfunctional joint surface is replaced with something better or by remodeling or realigning the joint by osteotomy or some other procedure.

관절해부학 3 credit

(ANATOMY OF THE JOINT)

This course is designed to learn the general anatomical terms for various joint features and explain the functional significance of each.

근육생리학 3 credit

(MUSCLE PHYSIOLOGY)

This course is designed to learn the structure and function of muscle with emphasis on the differential mechanism and regulation of contraction of different types of muscle.

미세수술학 3 credit

(MICRO SURGERY)

This course is designed to learn procedures of the microsurgery which is done when the structures being operated upon are so small that the surgeon requires a microscope in order to see them well enough to operate.

성인정형외과학 3 credit

(ADULT ORTHOPEDICS)

This course is designed to learn the pathophysiology, diagnosis, and treatment of orthopaedic diseases which can occur in adults.

소아정형외과학 3 credit

(PEDIATRIC ORTHOPAEDICS)

This course is designed to learn the pathophysiology, diagnosis, and treatment of orthopaedic diseases which can occur in children.

스포츠외상학 3 credit

(SPORTS INJURY)

This course is designed to learn the injury mechanism, diagnosis, and treatment of sports-related injuries.

슬관절외과학 3 credit

(KNEE SURGERY)

This course is designed to learn the pathophysiology, diagnosis, and treatment of orthopaedic diseases which occur in the soft tissue, bone, and joint around the knee.

재활의학 3 credit

(PHYSICAL MEDICINE ＆ REHABILITATION)

This course is designed to learn the method and process of rehabilitations after orthopaedic surgeries.

척추외과학 3 credit

(SPINAL SURGERY)

This course is designed to learn the pathophysiology, diagnosis, and treatment of disorders which affect nervous system including spinal cord and nerve root.

**흉부외과학전공**

기관성형술에대한연구 3 credit

(STUDY OF BRONCHOPLASTY)

늑막질환에대한외과적처치 3 credit

(SURGERY OF PLEURAL DISEASE)

선천성심장외과학 3 credit

(SURGERY OF CONGENITAL HEART DISEASE)

식도외과학 3 credit

(SURGERY OF THE ESOPHAGUS)

심근보호법 3 credit

(MYOCARDIAL PROTECTION)

심마비액에대한연구 3 credit

(STUDY OF CARDIOPLEGIA)

심장이식술에관한연구 3 credit

(STUDY ON CARDIAC TRANSPLANTATION)

심전도계이상에대한외과적처치 3 credit

(SURGERY OF CONDUCTION SYSTEM DISORDER)

심질환의수술후관리 3 credit

(POSTOPERATIVE CARE OF THE PATIENT WITH HEART DISEASE)

심폐이식 3 credit

(HEART-LUNG TRANSPLANTATION)

영유아심장외과학 3 credit

(SURGERY OF CONGENITAL HEART DISEASE IN NEWBORN AND INFANT)

외과적심장해부학 3 credit

(SURGICAL ANATOMY OF THE HEART)

저체온법에대한연구 3 credit

(STUDY OF HYPOTHERMIA)

종격동종양에대한외과적조치 3 credit

(SURGERY OF THE MEDIASTINAL TUMOR)

체외순환에대한연구 3 credit

(RESEARCH OF EXTRACORPOREAL CIRCULATION)

폐결핵외과학 3 credit

(SURGERY OF PULMONARY TUBERCULOSIS)

폐종양외과학 3 credit

(SURGERY OF LUNG TUMOR)

허혈성심질환에대한외과적처치 3 credit

(SURGERY OF ISCHEMIC HEART DISEASE)

후천성심장외과학 3 credit

(SURGERY OF ACQUIRED HEART DISEASE)

흉부외상학 3 credit

(CHEST TRAUMATOLOGY)

**신경외과학전공**

기능신경외과학및뇌정위수술학 3 credit

(STEREOTACTIC ＆ FUNCTIONAL NEUROSURGERY)

The purpose of this subject is to introduce stereotactic neurosurgery that is a minimally invasive form of surgical intervention which makes use of a three-dimensional coordinate system to locate small targets inside the body and to perform on them some action such as ablation, biopsy, lesion, injection, stimulation, implantation, radiosurgery (SRS) etc.

And also, functional neurosurgery comprises treatment of several disorders such as [Parkinson’s disease](http://en.wikipedia.org/wiki/Parkinson%E2%80%99s_disease), [hyperkinesis](http://en.wikipedia.org/wiki/Hyperkinesis), disorder of muscle tone, intractable pain, convulsive disorders and psychological phenomena.

뇌압항진연구(I.C.P) 3 credit

(INCREASED INTRACRANIAL PRESSURE)

The student should be able to

1. Explain the definition of cerebral perfusion pressure (ICP), pathophysiology of ICP and principles of ICP management

2. Describe how blood gases, fluids, and electrolyte balance ICP

3. Describe the clinical manifestations of acute brain herniation, including transtentorial, uncal, and subfalcine herniation syndromes

뇌졸중치료학 3 credit

(TREATMENT OF CEREBRAL STROKE)

The student should be able to

1. Distinguish the symptoms and signs of ischemic stroke versus hemorrhagic stroke

2. Describe the roles and indications of the following treatment options: medical management, indication of the surgical management, risk factor modification

뇌혈관질환 3 credit

(CEREBROVASCULAR DISEASE)

The student should be able to

1. Describe the pathophysiology of intracerebral hemorrhage (ICH), subarachnoid hemorrhage (SAH) and intra/extracranial stenotic lesions.

2. Describe the typical clinical course of patients with SAH and related complications such as hydrocephalus, vasospasm, stroke, etc;

뇌혈류학(C.B.F) 3 credit

(CEREBRAL BLOOD FLOW)

The student should be able to

1. Understand the relationship between ICP, Blood pressure (BP), Cerebral perfusion pressure (CPP), and Cerebral Blood Flow(CBF)

2. Recognize the Clinical Signs and Symptoms of ICP

동통신경외과학 3 credit

(NEUROSURGICAL PAIN SURGERY)

The purpose of this subject is to introduce neurosurgical pain surgery that offers comprehensive surgical management of drug resistant pain problems, including cancer pain and pain of other origin.

The performed procedures are morphine pump implantation for cancer pain, spinal cord stimulation for chronic intractable pain due to spinal disorder, and the non-invasive technique of gamma knife trigeminal rhizotomy for trigeminal neuralgia.

두개저부질환 3 credit

(SKULL BASE SURGERY)

The purpose of this subject is to introduce skull base surgery for managements of head and neck cancers abutting the skull base for which a skull base procedure is required to maximize tumor clearance/margins.

미세신경외과학 3 credit

(MICRO NEUROSURGERY)

Learning objective of for the micro neurosurgery,

1. Gaining a good understanding of surgical operation (tumor, vascular and spinal surgery)

2. To attend and experience the micro neurosurgery

소아신경외과학 3 credit

(PEDIATRIC NEUROSURGERY)

The purpose of this subject is to introduce pediatric neurosurgery for managements of pediatric stroke (Moyamoya disease), congenital brain/ spinal cord deformity, hydrocephalus, pediatric tumors.

신경병리학 3 credit

(NEUROPATHOLOGY)

The purpose of this subject is to introduce neuropathology that examines biopsy tissue from the brain and spinal cord to aid in diagnosis of disease.

신경안학·신경이학 3 credit

(NEUROPHTHALMOLOGY,NEUROTOLOGY)

Neuro-ophthalmology is the subspecialty of both [neurology](http://en.wikipedia.org/wiki/Neurology) and [ophthalmology](http://en.wikipedia.org/wiki/Ophthalmology) concerning [visual](http://en.wikipedia.org/wiki/Visual_perception) problems that are related to the [nervous system](http://en.wikipedia.org/wiki/Nervous_system). A neuro-ophthalmologist is a [physician](http://en.wikipedia.org/wiki/Physician) ([neurologist](http://en.wikipedia.org/wiki/Neurologist) or [ophthalmologist](http://en.wikipedia.org/wiki/Ophthalmologist)) specializing in diseases affecting [vision](http://en.wikipedia.org/wiki/Visual_perception) that originate from the [nervous system](http://en.wikipedia.org/wiki/Nervous_system).

Neurotology is a branch of clinical medicine which studies and treats neurological disorders of the [ear](http://en.wikipedia.org/wiki/Ear). It is a subspecialty of [otolaryngology](http://en.wikipedia.org/wiki/Otolaryngology)-head and neck surgery, and is closely related to [otology](http://en.wikipedia.org/wiki/Otology).

신경외과학적수술수기 3 credit

(NEUROSURGICAL TECHNOLOGY)

신경외상학 3 credit

(CNS TRAUMATOLOGY)

The purpose of this subject is to introduce neurosurgical treatments for brain injury including acute neurosurgical procedures to remove blood clots and decrease pressure from swelling in the brain, intracranial cerebral pressure monitoring and management in a neuro-critical care setting.

신경조영술학 3 credit

(NEURORADIOLOGY)

The student should be able to

1. Explain the knowledge and skills in all aspects of modern neuroradiology.

2. Explain the plain X-ray, Computed Tomography and Magnetic resonance image (MRI) of the normal structure.

3. They will know the risks, benefits, and costs of each imaging modality, enabling them to choose the appropriate study and the appropriate protocol for each patient.

신경종양학 3 credit

(NEUROONCOLOGY)

The purpose of this subject is to introduce current concepts on oncogenes, growth factors and their receptors, differentiation tumor markers and some of the immunological aspects of human gliomas, and therapeutic strategy.

신경해부학 3 credit

(NEUROANATOMY)

Learning objective of the neuroanatomy is to understand the topographical anatomy of the brain and spinal cord and the organization of the major neural system underlying sensory, motor and cognitive function.

자기공명영상학 3 credit

(MAGNETIC RESONANCE IMAGING)

The student should be able to

1. Demonstrate knowledge of magnetic resonance imaging principles.

2. Demonstrate magnetic resonance imaging safety principles in the clinical setting.

3. Apply basic computer skills in the clinical setting.

척추질환 3 credit

(SPINAL DISEASE)

**성형외과학**

감염 및 염증 3 credit

(INFECTION AND INFLAMMATION)

This subject covers infection, acute & chronic infllamation. Students learn the chain of infection, course of infection, common causative organism, antimicrobial resistance, defense mechanism of infection and inflammatory responses as secondary defenses.

두경부종양의수술및재건술 3 credit

(SURGERY OF HEAD AND NECK CANCER AND THE RECONSTRUCTION)

This subject covers operative techniques of head and neck tumors, effective reconstructive techniques of the defect, and management of postoperative complications. Students learn the characteristics of benign and malignant head and neck tumors, reasonable method of tumor resection, various methods of functional reconstruction of the defects, and management of critical complications.

두안면선천성기형 3 credit

(CRANIO-FACIAL ANOMALY)

This subject covers congenital craniofacial anomalies. Students learn craniofacial anomalies including cleft lip, cleft palate, and craniosynostosis. When you have finished this chapter, you should be able to describe the embryological development of the palate and skull, how clefts of the lip and palate form, clinical features of bilateral and unilateral clefts of the lip and palate, clinical manifestations and diagnosis of craniosynostosis, team approach and surgical principles used for treating craniofacial anomalies, along with the research evidence.

미세수술 3 credit

(MICRO SURGERY)

This subject covers principles and techniques of microsurgery. Students learn the modern operating microscope, microsurgical instruments, anastomotic devices, general principles of microvascular surgery, microvascular anastomosis technique, general aspects of free-flap surgery, postoperative management, complications and outcomes.

미용성형학 3 credit

(AESTHETIC SURGERY)

This subject covers aesthetic surgery and managing the cosmetic patients. Students learn the concept of beauty, patient motivation for cosmetic surgery, surgeon's initial consultation, characteristics of various cosmetic surgery, and postoperative follow-up.

성형외과와 조직공학 3 credit

(PLASTIC SURGERY AND TISSUE ENGINEERING)

This subject covers tissue engineering for plastic surgery. Students learn definition of tissue engineering, regenerative medicine, components of tissue engineering, various biomaterials, vascularization medel of tissue engineering, testing and characterization of tissue engineering approaches, and clinical application.

성형외과학총론 3 credit

(INTRODUCTION OF PLASTIC AND RECONSTRUCTIVE SURGERY)

This subject covers introduction of plastic and reconstructive surgery. Students learn the history of reconstructive and aesthetic surgery, psychological aspects, role of ethics, medico-legal issues in plastic surgery, and plastic surgery as innovation in mecidine.

수장부 수술 3 credit

(HAND SURGERY)

This subject covers introduction of hand surgery. Students learn anatomy & biomechanics of the hand, examination of the upper extremity, diagnostic imaging og the hand & wrist, reconstructive hand surgery, replantation & revascularization surgery, muscle & nerve transfer, and principles of internal fixation of the hand.

악골안면성형학 3 credit

(ORTHOGNATHIC SURGERY)

This subject covers orthognathic surgical procedures. Students learn anatomy of the neck, indication of orthognathic surgery, types of mandibular osteotomies, genioplasty, maxillary osteotomy, postoperative care, major complications.

안면외상학 3 credit

(FACIAL TRAUMATOLOGY)

This subject covers facial fracture and soft tissue trauma. Students learn anatomy of the face, innitial assessment of facial trauma patients, clinical examination of the face, radiography in facial trauma, indications for surgical treatment of blow-out fractures, upper facial fractures, midfacial fractures, lower facial fractures, classification of nasoethmoidal orbital fractures & zygomatic fractures, and postoperative management.

유방성형학 3 credit

(PLASTIC SURGERY OF THE BREAST)

This subject covers plastic surgery of the breast. Students learn anatomy for plastic surgery of the breast, breast augmentation, current concepts in revisionary breast surgery, mastopexy, mammoplasty, breast cancer diagnosis therapy and oncoplastic technique, imaging in reconstruction breast surgery, and free TRAM breast reconstruction.

재건성형학 3 credit

(RECONSTRUCTIVE SURGERY)

This subject covers introduction of reconstructive surgery. Students learn about history of reconstructive surgery, reconstruction of the hand, breast reconstruction, foot reconstruction, skeletal reconstruction, upper & lower extremity reconstruction, chest & abdominal wall reconstruction, and facial reconstruction.

체부윤곽성형술 3 credit

(BODY CONTOURING SURGERY)

This subject covers various techniques of correcting deformed body according to the localized obesity of abdomen, buttock and extremities. Students learn the indication, operative techniques and complications of surgical procedures such as abdominoplasty and recently developing liposuction

피부암의진단과치료 3 credit

(DIAGNOSIS AND MANAGEMENT OF SKIN CANCER)

This subject covers various methods of diagnosis, effective resection and reconstruction of skin cancer. Students acquire up to date knowledge managing skin cancer including squamous cell carcinoma, basal cell carcinoma and malignant melanoma.

피판술 3 credit

(FLAP SURGERY)

This subject covers profound knowledge of various flaps for clinical reconstructive surgery. Students learn the indications, designing of flaps, elevation of flaps and postoperative managements of various types of flap from simple local cutaneous flap to free flaps.

**소아청소년과학전공**

성장발육 3 credit

(GROWTH AND DEVELOPMENT)

소아감염병학 3 credit

(INFECTIOUS DISEASE IN CHILDREN)

소아내분비학 3 credit

(PEDIATRIC ENDOCRINOLOGY)

소아대사학 3 credit

(METABOLIC DISORDERS IN CHILHOOD)

This division aimed to foster a greater awareness and understanding as to the detection, treatment and control of metabolic disease and encourage the mind for research into improving early diagnosis is covering new and more effective treatments.

소아면역학 3 credit

(PEDIATRIC LMMUNOLOGY)

This division will give the student insight and understanding of immunological illness and the development and deficiencies of the immune response in childhood. And providing skills for the clinical evaluation and follow-up of immunological disease in children.

소아소화기학 3 credit

(PEDIATRIC GASTROENTEROLOGY)

The division of gastroenterology is dedicated to providing the highest quality medical care and state-of-the-art techniques in the evaluation and management of gastrointestinal, liver and nutritional disorders from infancy to young adulthood.

소아신경학 3 credit

(PEDIATRIC NEUROLOGY)

The purpose of pediatric neurology is to increase knowledge and capability of neurologist who diagnose and treat children with nervous system dysfunction. Main parts are brain development and function, historic and clinical examination, new technology, symptom complexes, and detailed discussion of various neurological diseases that afflict the children.

소아신장학 3 credit

(PEDIATRIC NEPHROLOGY)

소아심장병학 3 credit

(PEDIATRIC CARDIOLOGY)

소아알레르기학 3 credit

(PEDIATRIC ALLERGY)

소아예방 3 credit

(PREVENTIVE PEDIATRICS)

소아유전학 3 credit

(GENETICS)

The division of genetics deal with a molecular basis of human genetic disease, developmental genetics, chromosome structure and function, comprehensive knowledge of genetic disorders and genetic counseling.

소아종양학 3 credit

(PEDIATRIC ONCOLOGY)

The mission of this division is to provide the informations on the etiology, pathogenesis, incidence, clinical manifestation and prognosis of childhood cancer as well as the comprehensive, compassionate patient care and to provide the access to pediatric cancer research.

소아혈액학 3 credit

(PEDIATRIC HEMATOLOGY)

This division is focused on the understanding of the basic principles of the etiology, pathogenesis, cilnical presentation and general management of hematologic diseases in childhood. And also this division provides an understanding of normal erythropoiesis and pathophysiologic mechanisms underlying anemias, hemorragic disorders and the interpretation of common hematologic and hemostatic laboratory data, indications and risks of blood component therapy.

소아호흡기학 3 credit

(PEDIATRIC PULMONOLOGY)

신생아학 3 credit

(NEONATOLOGY)

**산부인과학전공**

난산과산도손상 3 credit

(DYSTOCIA ＆ INJURIES TO THE BIRTH CANAL)

부인과병리 3 credit

(GYNECOLOGIC PATHOLOGY)

불임증 3 credit

(INFERTILITY)

비뇨부인과학 3 credit

(UROGYNECOLOGY)

산과병리 3 credit

(OBSTETRIC PATHOLOGY)

산전관리및정상분만의경과와처치법 3 credit

(PRENATAL CARE ＆ CLINICAL COURSE ＆ MANAGEMENT OF NORMAL LABOR)

성기기형및성발달이상 3 credit

(CONGENITAL ANOMALIES ＆ DISORDERS OF SEXUAL DEVELOPMENT)

성의학 3 credit

(SEXOLOGY)In order to develop the sound sexual culture to study the anatomy, physiology, diseases of sexual organ and psychiatrical problems about sex. Included are adolescant sexual problems, sex of the olds and sexual deviations.

여성생식기의염증 3 credit

(INFLAMMATIONS OF FEMALE GENITAL TRACT)

여성생식기의종양 3 credit

(NEOPLASM OF FEMALE GENITAL TRACT)

이상임신및예후 3 credit

(ABNORMAL PREGNANCY ＆ ITS OUTCOME)

임신의생리및내분비기능 3 credit

(PHYSIOLOGY ＆ ENDOCRINOLOGY IN PREGNANCY)

임신중출혈·감염및임신성고혈압 3 credit

(HEMORRHAGE AND INFECTION IN PREGNANCY ＆ PREGNANCY-INDUCED HYPERTENSION)

정상임신및분반 3 credit

(NORMAL PREGNANCY ＆ DELIVERY)

체외수정및배이식 3 credit

(IN VITRO FERTILIZATION AND EMBRYO TRANSFER)

폐경기 3 credit

(MENOPAUSE)

피임법 3 credit

(CONTRACEPTION)

**신경과학전공**

근전도신경생리 3 credit

(EMG&NEUROPHYSIOLOGY)

The aim of this course is to provide the basic knowlegdes on neurophysiology of peripheral nerves, roots, spinal cord and muscle, and the fundamental methodology in accomplishment of electromyography, evoked potential study, nerver conduction study, and autonomic function test.

뇌파신경생리 3 credit

(EEG&NEUROPHYSIOLOGY)

The aim of this course is to provide the basic knowlegdes on electroencephalopathy, anatomy and physiology. This course will give comprehensive information in diagnosis of epilepsy and evaluation of comatose patients.

소아신경학 3 credit

(PEDIATRIC NEUROLOGY)

The purpose of pediatric neurology is to increase knowledge and capability of neurologist who diagnose and treat children with nervous system dysfunction. Main parts are brain development and function, historic and clinical examination, new technology, symptom complexes, and detailed iscussion of various neurological diseases that afflict the children.

신경내과 3 credit

(NEUROMEDICINE)

For the postgraduates who are interested in neurological diseases, more efficient clinical research and treatment will be achieved as a clinician through the intensive education about recent knowledge in the diagnosis and treatment of neurological diseases, such as stroke, epilepsy, movement disorder, muscle and nerve diseases.

신경면역학 3 credit

(NEUROIMMUNOLOGY)

Increasing rate of autoimmune disease makes clinicians to have the specialized training. Therefore, knowledges regarding the mechanisms of immune reaction, ways to regulation of response, pharmacologic interventions, and clinical use of immunosuppressant should be learnt by clinicians. The purpose of this course is to facilitate the way of learning for the approached for various immune reactions in central and peripheral nerveous system.

신경방사선과학 3 credit

(NEURORADIOLOGY)

The aim of this course is to provide the basic knowlegdes on the diagnosis and characterization of abnormalities of the central and peripheral nervous system, spine, and head and neck using neuroimaging techniques, such as computed tomography (CT), magnetic resonance imaging (MRI), MR angiography, and ultrasound.

신경병리 3 credit

(NEUROPATHOLOGY)

The disorders of the central nervous system are composed of vascular diseases, tumors, neurodegenerative deseases and others. Among them, CNS tumors are classified wihe various methods, and those are changing continuously. Recently the research methodology depends on molecular biology particularly. The results on the pathogenesis of both neurodegenerative diseases and brain tumors are getting increased more and more. In this neuropathology, it would be emphasized on molecular biology results of brain tumors and degenerative deseases, and then on the relationship between molecular results and patient's prognosis

신경생화학 3 credit

(NEUROBIOCHEMISTRY)

The purpose of neurochemistry is to provide the basic knowlegdes of neurochemicals, including neurotransmitters and other molecules such as neuro-active drugs that influence neuron function. This principle closely examines the manner in which these neurochemicals influence the network of neural operation and neural processes such as cortical plasticity, neurogenesis and neural differentiation.

신경안과 3 credit

(NEURO-OPHTHAMOLOGY)

The purpose of pediatric neurology is to increase knowledge and capability of neurologist who diagnose and treat children with nervous system dysfunction. Main parts are brain development and function, historic and clinical examination, new technology, symptom complexes, and detailed discussion of various neurological diseases that afflict the children.

신경약리 3 credit

(NEUROPHARMACOLOGY)

The purpose of this subject is to introduce the mechanism of how drugs affect cellular function in the nervous systems and the interactions of neurotransmitters, neuropeptides, neurohormones, neuromodulators, enzymes, second messengers, co-transporters, ion channels, and receptor proteins in the central and peripheral nervous systems.

신경종양학 3 credit

(NEUROONCOLOGY)

The purpose of this subject is to introduce current concepts on oncogenes, growth factors and their receptors, differentiation tumor markers and some of the immunological aspects of human gliomas, and therapeutic strategy.

신경초음파학 3 credi

(NEUROSONOLOGY)

Neurosonography is the application og ultrasound technolngy to the diagnosis and follow-up of lesions of the brain and menings, spinal cord and canal, carotid arteries, eye and orbit. As such, neurosonography has a definite role in the management of a broad range of neurological disease.

신경치료학 3 credit

(NEUROTHERAPY)

The aim of this course is to provide up-to-date treatments of various neurological disease, such as stroke, epilepsy, movement disorder, degenerative diseases, demyelinating diseases, muscle and nerve diseases.

신경해부 3 credit

(NEUROANATOMY)

The aim of this course is to provide the detailed knowedeges of anatomy of peripheral nerves, spinal cord and brain and to get the capability of accurate anatomic localization of pathology in the nervous system.

신체정신의학 3 credit

(PSYCHOSOMATIC MEDICINE)

The aim of this course is to provide the graduate students with the scope, methodology and up-to-date knowlegdes of various areas in the basic neuroscience. This course will help the students have an upgraded perspectives on their specialty. The subjects in this course includes neuroanatomy, neurophysiology, neurochemistry, molecular biology, genetics, behavioral pharamacology and so on.

임상신경학 3 credit

(CLINICAL NEUROLOGY)

For the postgraduates who are interested in neurological diseases, more efficient clinical research and treatment will be achieved as a clinician through the intensive education about recent knowledge in the diagnosis and treatment of neurological diseases, such as stroke, epilepsy, movement disorder, muscle and nerve diseases.

**정신건강의학전공**

노인정신과학 3 credit

(GERIATRIC PSYCHIATRY)

Geriatric Psychiatry;s mission is to improve the mental health and well-being of older adults through innovative translational neuroscience and health care services research.

문화정신의학 3 credit

(CULTURAL PSYCHIATRY)

a branch of psychiatry concerned with the cultural and ethnic context of mental disorders and psychiatric services

미래정신의학 3 credit

(FUTURE PSYCHIATRY)

This lecture aims to present a synthesis of the key conceptual and social issues facing psychiatry right now and to provide a tool for further discussion in many areas, both in psychiatry and in academic medicine more broadly

생물정신의학 3 credit

(BIOLOGICAL PSYCHIATRY)

Main goals of the lectures are to provide a basic knowledge of clinical psychiatry and to foster a positive attitude toward mental illnesses. students have the opportunity to learn, theory of psychotherapy, biological therapy, and variety of psychiatric disorders.

소아정신과학 3 credit

(CHILD PSYCHIATRY)

The branch of psychiatry that specializes in the study, diagnosis, treatment, and prevention of psychopathological disorders of children, adolescents, and their families

수면과꿈 3 credit

(SLEEP ＆ DREAM)

We discuss why REM sleep and dreaming are critical factors in maintaining an individual’s alertness and function. We also discusses how dreams may help us remember more, and why sleep apnea and other sleep disorders that disrupt REM sleep can impair memory. This lecture can help determine how your sleeping challenges may be affecting your mental sharpness and memory― and how this relates to your dreaming capacity.

인격이론 3 credit

(PERSONALITY THEORY)

Personality theories are a reflection of the unique cultural background, family experiences, personalities, and professional training of their originators. the lectures acquaint students with the meaning of personality and provide them with a solid foundation for understanding the nature of theory, as well as its crucial contributions to science.

일반환자와정신과학 3 credit

(PSYCHOSOMATIC MEDICINE)

an interdisciplinary medical field studying the relationships of social, psychological, and behavioral factors on bodily processes and quality of life in humans and animals.

자문정신의학 3 credit

(CONSULTATION LIAISON PSYCHIATRY)

the branch of psychiatry that specializes in the interface between medicine and psychiatry, to see patients with comorbid medical conditions at the request of the treating medical or surgical consultant or team

정신분석 3 credit

(PSYCHOANALYSIS)

The method of psychological therapy originated by Sigmund Freud in which free association, dream interpretation, and analysis of resistance and transference are used to explore repressed or unconscious impulses, anxieties, and internal conflicts, in order to free psychic energy for mature love and work.

정신생리의학 3 credit

(PSYCHOPHYSIOLOGY)

The branch of physiology dealing with the relationship between physiological processes and thoughts, emotions, and behavior. Psychophysiological measures are often used to study emotion and attention responses to stimuli, during exertion,and increasingly, to better understand cognitive processes.

정신생물학적연구법 3 credit

(RESEARCH METHOD OF PSYCHO-BIOLOGY)

The branch of biology dealing with the relations or interactions between body and behavior, esp. as exhibited in the nervous system, receptors, effectors, or the like. The school of psychology that interprets personality, behavior, and mental illness in terms of responses to interrelated biological, social, cultural, and environmental factors.

정신성의학 3 credit

(PSYCHOSEXUAL THERAPY)

Psychosexual Therapy, known as PST, is treatment by a qualified practitioner which addresses a sexual dysfunction or emotional block within a relationship. PST is a behavioural programme which openly explores and discusses the sexual problem and looks at emotional blocks for the couple.

정신약물학 3 credit

(PSYCHOPHARMACOLOGY)

In psychopharmacology it is important to understand medical treatment of psychological disorders. The primary goal of this course is educating about which medications are currently prescribed and how they works.

정신역사학 3 credit

(HISTORY OF PSYCHIATRY)

This lecture is to provide knowledge on the development of psychiatry, raging from ancient to modern psychiatry. Through knowledge about the history of psychiatry, students can understand development of theory of psychiatry.

정신치료 3 credit

(PSYCHOTHERAPY)

Students are asked to compare and analyze the basic concepts and therapeutic skills of diverse theories of psychological therapy, through case studies.

집단정신치료 3 credit

(GROUP PSYCHOTHERAPY)

Group psychotherapy is a form of psychotherapy in which one or more therapists treat a small group of clients together as a group. Students have opportunity to learn basic theory and practice of group psychotherapy

행동과학 3 credit

(BEHAVIORAL SCIENCE)

Behavioral science is concerned with the study of human and animal behavior. It involves the systematic analysis and investigation of human and animal behaviour through controlled and naturalistic observation, and disciplined scientific experimentation.

행동치료 3 credit

(BEHAVIOR THERAPY)

Main goal of this lectures are to provide a basic knowledge of three disciplines fo behavior therapy(applied behavior analysis(ABA), cognitive behavior therapy(CBT), and Habit reversal training(HRT)) and applied behavior therapy to real case.

**안과학전공**

녹내장 3 credit

(GLAUCOMA)

The unit will cover the theoretical knowledge needed to detect and manage glaucoma. It will cover the structural and functional losses seen in glaucoma and the therapeutic options. Emphasis will be placed on the instrumentation and techniques used in management and their theoretical basis/mode of operation. It is intended that those who graduate from this unit will have an advanced knowledge of this condition with a practical understanding of the latest methods of detection and management.

백내장수술학및인공수정체 3 credit

(CATARACT SURGERY & INTRAOCULAR LENS)

The purpose of this course is to serve the theoretical understanding of cataract formation and cataract surgery which includes the removal of the natural lens of the eye that has developed an opacification.

소아안과학 3 credit

(PEDIATRIC OPHTHALMOLOGY)

This course focuses on the development of the visual system and the various diseases that disrupt visual development in children.

신경안과학 3 credit

(NEURO-OPHTHALMOLOGY)

Study of the basic mechanisms on the visual processing and the control of eye movements and discussion of several disorders of neuro-ophthalmologic importance are the main aim.

안과수술학 3 credit

(OPHTHALMIC SURGERY Ⅰ)

This course covers basic principles of eye surgery. Emphasis will be placed on the instrumentation and techniques used in management and their theoretical basis/mode of operation.

안과전기생리학 3 credit

(ELECTROPHYSIOLOGY OF THE EYE)

The course will be of value to postgraduates who wish to understand basic principle of clinical electrophysiology which can be used to provide information about the visual system beyond the standard clinical examination of the eye.

안과진단학 3 credit

(OPHTHALMIC DIAGNOSTICS)

This course will cover the basic principle of diagnosis of eye disorders. Diagnosis of eye disorders is initially based on the symptoms that the person is experiencing, the appearance of the eyes, and the results of an examination. It is intended that those who graduate from this course will have an advanced knowledge of diagnosis of various eye disorders with newly introduced diagnostic device.

안미생물학 3 credit

(OCULAR MICROBIOLOGY)

This course covers the acute infections of the external eye caused by a vivid range of microbiological pathogens encompassing bacteria, viruses and fungi. The most common eye infections include Blepharitis, Styes, conjunctivitis and keratitis. Recent studies have shown that the types of pathogenic organisms are constantly changing and as are their antibiotic resistance patterns. Furthermore the course also introduce a surveillance program of monitoring the antibiotic resistance pattern of ocular pathogens that would keep a check of the increasing trend of resistance.

안발생학 3 credit

(OCULAR EMBRYOLOGY)

This course covers the introduction of the development of eyes. A brief description of the basic patterns of mammalian development of the eye is presented based on events as they occur in human beings. The emphasis is not on the details of this development, but rather on its organization and timing, with a figure of comparative development providing a comparison of similar events in man, rat, mouse, and chick.

안병리학 3 credit

(OCULAR PATHOLOGY)

This unit will cover the microscopic diagnosis of tissue specimens of the eye or parts of the eye. Such specimens include the conjunctiva, orbit, lacrimal gland, lacrimal drainage system, optic nerve, vitreous, and the whole eye. These lesions can be benign or malignant. The most common cancers diagnosed are retinoblastoma (cancer of the retina) in children, and melanoma in adults.

안생리학 3 credit

(OCULAR PHYSIOLOGY)

This course covers updated knowledge to enhance the understanding of ocular function. It will also cover the latest molecular, genetic, and biochemical discoveries and offers the unparalleled knowledge and insight into the physiology of the eye and its structures. A new organization by function, rather than anatomy, helps the postgraduates make a stronger connection between physiological principles and clinical practice.

안성형외과학 3 credit

(OPHTHALMIC PLASTIC SURGERY)

This course covers a wide variety of surgical procedures that deal with the orbit (eye socket), eyelids, tear ducts, and the face. It also deals with the reconstruction of the eye and associated structures

안약리학 3 credit

(OPHTHALMIC PHARMACOLOGY)

This unit will cover biopharmaceuticals that have the potential to prevent, treat, and diagnose ocular diseases and disorders. The course delivers the latest discoveries in the pharmacokinetics and pharmacodynamics of biopharmaceuticals for the treatment of ophthalmic disorders.

안외상학 3 credit

(OCULAR TRAUMATOLOGY)

All aspects of ophthalmic trauma from the lid to the optic nerve of both mechanical and nonmechanical trauma are covered in this course. The focus is on practical issues and incorporates cutting-edge approaches, such as temporary keratosprosthesis, artificial iris diaphragm, and prophylactic retinectomy.

안해부학 3 credit

(OCULAR ANATOMY)

This course includes the anatomy of lacrimal gland, cornea, conjunctiva, uvea (iris, choroid & ciliary body), lens, blood supply, retina, vitreous & optic-nerve. For postgraduates, eye-anatomy forms the basis for eye-pathology in diseases: dry eye, retinal detachment, macular degeneration, diabetic retinopathy, eye-trauma etc.

외안부질환 3 credit

(EXTERNAL DISEASE OF THE EYE)

This unit will provide medical and surgical evaluation and management for corneal and external disease problems, including corneal transplantation, contact lenses and excimer laser therapy

초자체망막질환 3 credit

(VITREORETINAL DISEASES)

This unit will cover the diseases of vitreous and retina which is the light-sensitive layer of tissue that lines the inside of the eye and sends visual messages through the optic nerve to the brain. This course will serve the detailed information on macular degeneration, retinal detachment, macular holes, and diabetic retinopathy.

**비뇨기과학전공**

내비뇨기과학 3 credit

(ENDOUROLOGY)

The purpose of this course is to understand the basic knowledge of the established diagnostic and treatment modalities using cystoscopy, ureteroscopy and renoscopy, and to learn the promising applied scientific tools for urogenital approaches in the future.

비뇨생식기결핵 3 credit

(GENITOURINARY TUBERCULOSIS)

The aim of this course is to understand the pathogenesis of tuberculosis and learn the treatment modalities and prevent or minimize sequelae of tuberculosis.

비뇨생식기기형 3 credit

(ANOMALIES OF THE GENITOURINARY TRACT)

In this course, student will study the etiology and mechanism of various anomalies of the genitourinary tract and discuss the significance of the diagnosis and treatment modalities.

비뇨생식기내분비학 3 credit

(GENITOURINARY ENDOCRINOLOGY)

The aim of this course is to understand endocrinology of the genitourianry tract system, such as kidney, adrenal gland, prostate, and testis.

비뇨생식기종양학 3 credit

(GENITOURINARY ONCOLOGY)

The purpose of this course is to understand the diagnosis and treatment of urological malignancies such as renal cell carcinoma, bladder tumor, ureter tumor, prostate cancer, and testis tumor. Treatments such as surgical therapy, various pharmacological therapy-chemotherapy, immunotherapy, and hormonal therapy will be covered.

비뇨생식기해부및생리학 3 credit

(ANATOMY AND PHYSIOLOGY OF THE GENITOURINARY SYSTEM)

The aim of this course is to understand anatomy and physiology of the genitourianry tract system, such as kidney, ureter, bladder, prostate, testis and urethra.

In this course, lectures, detailed laboratory dissections, and prosections will provide a thorough exploration of the gross structure and functions of genitourinary system.

성기능장애 3 credit

(SEXUAL DYSFUNCTION)

Sexual dysfunction refers to a problem occurring during any phase of the sexual response cycle that prevents the individual or couple from experiencing satisfaction from the sexual activity. The sexual response cycle traditionally includes excitement, plateau, orgasm and resolution. Desire and arousal are both part of the excitement phase of the sexual response.

In this course, student will study the neurophysiology, hemodynamics and pharmacology of penile erection, and to understand the etiology and treatment principle of sexual dysfunction.

소아비뇨기과학 3 credit

(PEDIATRIC UROLOGY)

The aim of this course is to learn the diagnosis and treatment of clinically significant congenital urogenital disorders, such as cryptorchism, hypospadias, vesicoureteral reflux, voiding dysfunction, ureteropelvic junction

obstruction, duplex system and hermaphroditism.

신이식술 3 credit

(RENAL TRANSPLANTATION)

The purpose of this course is to understand the indication of renal transplantation and learn the various transplantation technique modalities.

신혈관성고혈압 3 credit

(RENOVASCULAR HYPERTENSION)

The aim of this course is to understand the etiology and mechanism of renovasicular hypertension. Students will study various treatment modalities, such as the endourological approach, laparoscopic surgery and open surgery.

요로감염증 3 credit

(URINARY TRACT INFECTION)

Urinary tract infections are a common cause of morbidity and can lead to significant mortality. Careful diagnosis and treatment result in successful resolution of infections in most instances. A better understanding of the

pathogenesis of infections and the role of host and bacterial factors has improved the ability to identify patients at risk and prevent or minimize sequelae. Although the vast majority of patients respond promptly and are cured by therapy, early identification and treatment of patients with complicated infections that place them at significant risk remain a clinical

challenge to urologists.

요로결석증 3 credit

(UROLITHIASIS)

The purpose of this course is to understand the etiology and mechanism of stone formation, and pathophysiology of urolithiasis. Students will study various treatment modalities, such as the endourological approach, shockwave lithotripsy and laparoscopic surgery, as well as the clinical significance of metabolic derangement.

요로신경근육질환 3 credit

(URINARY NEUROMUSCULAR DYSFUNCTION)

In this course, student will study the etiology,mechanism, and pathophysiologyof urinary neuromuscular dysfunction, and the appropriate diagnosis and various treatment modalities.

요로전환술 3 credit

(URINARY DIVERSION)

The purpose of this course is to understand the indication of urinary diversion and learn the various treatment modalities.

요로촬영술 3 credit

(IMAGING OF THE URINARY TRACT)

The aim of this course is to assess and understand already reported imaging findings of various diseases of the urinary tract and male and female genital tracts, and to deepen the level of understanding of those imaging findings on the pathophysiologic background. Hopefully, those who participated in this course may have an idea on a study for unknown imaging findings of the diseases of the urogenital tracts, which may be explained on the pathophysiologic background.

요로폐쇄증 3 credit

(URINARY TRACT OBSTRUCTION)

The purpose of this course is to understand the etiology and pathophysiology of urinary obstructions, and to understand appropriate diagnosis and various treatment modalities.

전립선질환 3 credit

(DISEASES OF THE PROSTATE)

The aim of this course is to learn the diagnosis and treatment of clinically significant prostate disease, such as benign prostate hyperplasia, prostatitis, and prostate cancer.

**피부과학전공**

광생물학 3 credit

(PHOTOBIOLOGY)

구진인설성질환3 credit

(PAPULO-SQUAMOUS DISEASES)

나병학 3 credit

(LEPROLOGY)

성병학 3 credit

(VENEREOLOGY)

수포성피부질환 3 credit

(VESICOBULLOUS DISEASES OF THE SKIN)

스테로이드요법 3 credit

(STEROID THERAPY)

피부과알레르기 3 credit

(DERMATOLOGIC ALLERGY)

피부과학총론 3 credit

(INTRODUCTION OF DERMATOLOGY)

피부과학치료총론 3 credit

(INTRODUCTION OF DERMATOLOGIC TREATMENT)

피부면역학 3 credit

(DERMATOLOGIC IMMUNOLOGY)

피부병태생리학 3 credit

(PATHOPHYSIOLOGY OF THE SKIN)

피부색소이상 3 credit

(PIGMENTARY DISORDERS OF THE SKIN)

피부생리학및생화학 3 credit

(PIGMENTARY DISORDERS OF THE SKIN)

피부의세균학 3 credit

(MICROBIOLOGY OF THE SKIN)

피부조직병리학 3 credit

(DERMATOPATHOLOGY)

피부종양학 3 credit

(ONCOLOGY OF THE SKIN)

피부진균학 3 credit

(MYCOLOGY OF THE SKIN)

**이비인후과학전공**

갑상선종양학 3 credit

(THYROID TUMOR)

The intention of this subject is to present in thyroid tumor. Thyroid tumor is one of the most important thyroid disease requiring surgical treatment. This subject deal with etioloy, pathophysiology, diagnostic approach, and treatment of thyroid tumor.

기관식도과학 3 credit

(BRONCHOESOPHAGOLOGY)

The intention of this subject is to present in tracheobronchial and esophageal disease. Tracheobronchial stenosis or foreign body is one of the most dangerous acute airway disease. And gastroesophageal reflux disease is one of the most common disease of the head and neck surgery field. This subject deal with etioloy, pathophysiology, diagnostic approach and treatment of tracheobronchial stenosis or foreign body, and gastroesophageal reflux disease.

두경부방사선요법 3 credit

(RADIOTHERAPY OF HEAD AND NECK)

The intention of this subject is to present in radiotherapy of head and neck. Radiotherapy is one of the most common treatment method for head and neck squamous cell carcinoma preoperatively or postoperatively. This subject deal with methodology, protection, current opinions, and protocols for head and neck squamous cell carcinoma.

두경부수술학 3 credit

(HEAD ＆ NECK SURGERY)

The intention of this subject is to present in unique way basic head and neck surgeries such as neck dissection, major salivary gland excision, oral cavity mass excision, partial or total laryngectomy, reconstruction, etc. Each subject deal with surgical indication, method, and complication.

두경부종양학 3 credit

(HEAD & NECK ONCOLOGY)

The intention of this subject is to present in head and neck tumor. Head and neck is usually requiring surgical treatment. This subject deal with etioloy, pathophysiology, diagnostic approach and treatment of various head and neck tumor.

부비동내시경수술학 3 credit

(ENDOSCOPIC SINUS SURGERY)

The intention of this subject is to present in unique way basic endoscopic sinus surgeries such as endoscopic sinusectomy, endoscopic medial maxillectomy, endoscopic septoplasty, endoscopic turbinoplasty, endoscopic anterior skull-base surgery, endoscopic hypophysectomy, etc. Each subject deal with surgical indication, method, and complication.

비과기초연구 3 credit

(BASIC RESEARCH OF RHINOLOGY)

The intention of this subject is to present in basic research of rhinology such as histology, physiology, immunology, molecular biology and allergy. This subject deal with many rhinologic research such as immune reaction, mucin genes, allergens, and nasal stimulant such as dust and odor.

비과수술학 3 credit

(RHINOLOGIC SURGERY)

The intention of this subject is to present in unique way basic rhinologic surgeries such as septal surgery, turbinate surgery, endoscopic sinus surgery, external sinus surgery and rhinoplasty. Each subject deal with surgical indication, method, and complication.

비과학총론 3 credit

(GENERAL RHINOLOGY)

The intention of this subject is to present in general rhinologic fields such as anatomy, physiology, diagnostic method, and disease. This subject deal with many rhinologic diseases such as rhinitis, sinusitis, benign and malignant tumors.

상기도생리학 3 credit

(PHYSIOLOGY OF UPPER RESPIRATORY TRACT)

The intention of this subject is to present in physiology of upper respiratory tract such as anatomy, histology, and physiology. This subject deal with many respiratory stimulant, anatomy and physiology of vagus nerve, and responses to drugs of upper respiratory tract.

상기도질병학 3 credit

(DISEASE OF UPPER RESPIRATORY TRACT)

The intention of this subject is to present in disease of upper respiratory tract such as acute upper respiratory obstruction, tracheobronchial spasm, laryngeal spasm, laryngotracheal stenosis, and tumor. These subject deal with etioloy, pathophysiology, diagnostic approach, and treatment of allergic rhinitis.

안명성형외과학 3 credit

(MAXILLO-FACIAL PLASTIC SURGERY)

The intention of this subject is to present in maxillo-facial plastic surgery. Maxillo-facial area is one of the most important part of otorhinolaryngology fields. This subject deal with maxillo-facial traumas, rejuvenation, reconstruction, and corrective or augmentation rhinoplasty including surgical indication, method, and complication.

알레르기학 3 credit

(NASAL ALLERGY)

The intention of this subject is to present in allergic rhinitis. Allergic rhinitis is one of the most common rhinologic disease. This subject deal with etioloy, pathophysiology, diagnostic approach, and treatment of allergic rhinitis.

어지러움증 3 credit

(VERTIGO)

The intention of this subject is to present in vertigo. Vertigo is one of the most common otologic disease. This subject deal with etioloy, pathophysiology, diagnostic approach, differential diagnosis, and treatment of vertigo.

음성언어학 3 credit

(SPEECH & VOICE)

The intention of this subject is to present in speech rehabilitation. Speech rehabilitation is one of the most important field of logopedics and phoniatrics especially for elderly. This subject deal with etioloy, pathophysiology, diagnostic approach, differential diagnosis and treatment of speech disturbance.

이과수술학 3 credit

(OTOLOGIC SURGERY)

The intention of this subject is to present in unique way basic otologic surgeries such as myringotomy with V-tube insertion, tympanoplasty, mastoidectomy, and inner ear surgery. Each subject deal with surgical indication, method, and complication.

이비인후과수술학 3 credit

(SURGERY OF EAR, NOSE ＆ THROAT)

The intention of this subject is to present in unique way basic otorhinolarygologic surgeries such as ear surgeries, rhinologic surgeries, and head and neck surgeries. Each subject deal with basic surgical techniques, expert’s advice, and tips.

이비인후과학총론 3 credit

(GENERAL OTOLARYNGOLOGY)

The intention of this subject is to present in general otorhinolaryngologic fields such as anatomy, physiology, diagnostic method and disease. This subject deal with many otorhinolaryngologic inflammatory, traumatic, and tumorous conditions.

전정기능검사법 3 credit

(VESTIBULAR FUNCTION TEST)

The intention of this subject is to present in vestibular function test. Vertigo is one of the most common otologic disease. This subject deal with method, indication, caution, and corelation between tests and dilemmas for each vestibular function tests.

청각학 3 credit

(OTOLOGY)

The intention of this subject is to present in general otologic fields such as anatomy, physiology, diagnostic method, and disease. This subject deal with many otologic diseases such as conductive hearing loss, sensorineural hearing loss, chronic otitis media, otitis media with effusion, and facial palsy.

청기병리학 3 credit

(OTOLOGIC PATHOPHYSIOLOGY)

The intention of this subject is to present in pathophysiologic tract of otology such as pathophysiology of otitis media with effusion, pathophysiology of cholesteatoma, pathophysiology of conductive hearing loss, pathophysiology of sensorineural hearing loss, and pathophysiology of vertigo.

청기생리학 3 credit

(PHYSIOLOGY OF HEARING APPARATUS)

The intention of this subject is to present in physiology of hearing apparatus such as external auditory canal, tympanic membrane, ossicles, cochlea, and acoustic nerves. This subject deal with microanatomy and physiology of hearing apparatus, and hearing aids.

항공및잠수의학 3 credit

(AVIATION AND DIVING MEDICINE)

The intention of this subject is to present in general aviation and diving medicine fields such as anatomy, physiology, diagnostic method, and disease. This subject deal with many aviation and diving medical diseases such as barotrauma, perilymph fistula, and diver’s disease.

후두학 3 credit

(LARYNGOLOGY)

The intention of this subject is to present in general laryngologic fields such as anatomy, physiology, diagnostic method and disease. This subject deal with many laryngologic diseases such as vocal nodule, vocal polyp, laryngopharyngeal reflux disease, vocal cord palsy, spasmodic dysphonia, and laryngeal cancer.

**영상의학과전공**

근골격계영상의학 3 credit

(MUSCULOSKELETAL RADIOLOGY)

Obtaining the knowledge of cross-sectional imaging findings or the normal anatomy of the musculoskeletal system on the variety of diagnostic modalities (including MR, ultrasound, etc), and learning how to diagnose variety of imaging modalities by a through discussion.

두경부영상의학 3 credit

(HEAD AND NECK RADIOLOGY)

방사선장애방어 3 credit

(RADIATION&HEALTH PHYSICS)

방사선진단물리 3 credit

(DIAGONOSTIC RADIATION PHYSICS)

비뇨생식기계영상의학 3 credit

(GENITOURINARY RADIOLOGY)

Understanding the normal radiologicl anatomy of urogenital organs and diagnostic tools and methods using in the diagnosis of urogenital disorders. And learning the radiologic findings of normal and abnormal pregnancies and various abnormalities arising in urinary and male and female genital organs.

소아영상의학 3 credit

(PEDIATRIC RACIOLOGY)

To understand the radiologic findings and difference of newborn and child disease compared with adult, We study characteristic radiologic findings of newborn and child disease, mainly thoracic and abdominal organs, to provide benefit for clinical diagnostic procedure

신경영상의학 3 credit

(NEURORADIOLOGY)

영상의학과학실습 3 credit

(DIAGNOSTIC RADIATION PRACTICE)

영상해부학 3 credit

(RADIOLOGIC ANATOMY)

유방영상의학 3 credit

(BREAST RADIOLOGY)

To understand screening examination for breast cancer using ultrasonography and mammogram according to increased incidence of breast cancer, and understand the finding of magnetic resonance imaging which may helpful to evaluation of early cancer

응급영상의학 3 credit

(EMERGENCY RADIOLOGY)

We study the characteristic radiologic findings and follow up change of thoracic and abdominal diseases in critical care unit and emergency room. Espcecially, we evaluate several critical disease which are adult respiratory distress syndrome, pneumothorax, and pulmonary edema after blunt trauma

자기공명영산진단학 3 credit

(DIAGNOSTIC MAGNETIC RESONANCE LMAGING)

전산화단층촬영영상학 3 credit

(COMPUTED TOMOGRAM DIAGRNOSIS)

To understanding the physics and technique of computed tomogram and the radiologic finding of various kinds of clinical disease can make differential diagnosis. And practice the methods of CT-guided biopsy and angiography.

중재적영상의학 3 credit

(INTERVENTIONAL RADIOLOGY)

초음파진단학 3 credit

(DIAGNOSTIC ULTRASOUND)

흉부영상의학 3 credit

(THORACIC RADIOLOGY)

We study the characteristic radiologic findings of simple radiograph and computed tomograph of disease which are commonly occured in thorax to provide benefit for clinical diagnostic procedure. And we also evaluate the radiologic findings of opportunistic infection and tumor in immunocompromised host.

**방사선종양학전공**

근접치료 방사선물리학 3 credit

(RADIATION PHYSICS OF BRACHYTHERAPY)

1) Fundamental concept of isotope radiation physics

2) Calibration and dose distribution of brachytherapy source

3) Systems of implant dosimetry : Paterson-Parker system, Quimby system, Memorial system, Paris system

4) Implantation techniques

5) Remote Afterloading Units

6) Three dimensional brachytherapy treatment planning

근접치료의 임상적적용 3 credit

(CLINICAL APPLICATION OF BRACHYTHERAPY)

This program is designed for the students who wish to pursue a career in radiation oncology. Main objectives of this course are to learn selection of radioactive material, templates, molds, remote control afterloading system, implantation procedures, low dose rate brachytherapy techniques for specific sites, quality assurance and radiation safety.

방사선계측 및 안전관리 3 credit

(RADIATION DOSIMETRY & SAFETY MANAGEMENT)

1) Concept of radiation dosimetry

2) Characteristic of radiation dosimetry system and radiation treatment system

3) Concept of radiation protection and safety management

4) QA/QC of simulator system

5) QA/QC of radiation treatment system

6) QA/QC of brachytherapy system

7) QA/QC of computer radiation treatment planning system

방사선생물학 3 credit

(RADIATION BIOLOGY)

This subject is about effects of radiation on cells, direct and indirect action of radiation, cell survival curves, factors affecting cell response to radiation, short-term effects of total body irradiation, and long-term effects of radiation.

방사선손상과 회복 3 credit

(RADIATION DAMAGE AND REPAIR)

This program is designed for the students who wish to pursue a career in radiation oncology. Main objectives of this course are to learn classification of radiation damage, high LET radiation, mechanism of potentially lethal damage and sublethal damage repair, repair and radiation quality, dose-rate effect, continuous exposure, brachytherapy and radiolabeled immunoglobulin therapy.

방사선의 급·만성영향 3 credit

(ACUTE AND LATE EFFECTS OF RADIATION)

This program is designed for the students who wish to pursue a career in radiation oncology. Main objectives of this course are to learn acute effects of total body irradiation, radiation carcinogenesis, hereditary effects of radiation, effects of radiation on the embryo and fetus, radiation cataractogenesis, and radiation protection.

방사선절제술 3 credit

(RADIOSURGERY)

This program is designed for the students who wish to pursue a career in radiation oncology. Main objectives of this course are to learn histological background, physics and clinical experience, radiosurgery systems and indication, target volume determination and localization, arteriovenous malformation, dose-volume relationships, imaging studies after radiosurgery, and clinical trial.

방사선치료의 득과 실 3 credit

(RADIATION RISK VERSUS BENEFIT)

1. To study the positive effect and clinical benefits of electromagnetic radiation, including cell death and disturbance of tumor cell proliferation.

2. To study the negative effect and possible disadvantage of electromagnetic radiation, including normal tissue damage and the causes of complication that can be applicable to the practical cancer treatment.

소화기방사선종양학 3 credit

(RADIATION ONCOLOGY-GI TRACT)

1. To study the carcinogenesis, biology, pathway of tumor spread, staging, prognostic factors and failure patterns of prevalent GI cancer in Korea such as gastric cancer, esophageal cancer, liver cancer, biliary tract cancer and colorectal cancer.

2. To study the advantages, disadvantages, complications of surgery, preoperative radiation therapy, intraoperative radiation therapy, postoperative radiation therapy, chemotherapy and prognostic factors for GI tract cancer.

온열 및 방사선치료의 원리 3 credit

(HYPERTHERMIA & RADIATION THERAPY)

1. To study the rationale, indications, advantage and disadvantage, complication and good techniques for prevention of complications in hyperthermia treatment.

2. To study the rationale, advantages and disadvantages, complications and prognostic factors for combination treatment such as radiation-hyperthermia or chemotherapy-hyperthermia treatment and the multi-disciplinary treatment such as radio-chemo-thermotherapy.

원격치료 방사선물리학 3 credit

(RADIATION PHYSICS OF TELETHERAPY)

1) Fundamental concept of radiation physics

2) Concept of absorbed dose, exposure, and activity

3) Interactions of ionizing radiation with matter

4) Concept of GTV, CTV, and PTV in radiation treatment planning

5) Electron beam therapy

6) Radiation treatment planning : isodose distribution, patient data, field shaping

종양진단학 3 credit

(ONCOLOGIC IMAGING)

This program is designed for the students who wish to pursue a career in radiation oncology. Main objectives of this course are to learn the staging and classification of cancers, imaging strategies for oncologic diagnosis, clinical application for specific organs, tumor of skeletal system, soft tissue tumors of appendicular skeleton, pediatric oncology, computed tomography and radiation therapy treatment planning, contribution of interventional radiology to diagnosis and management of the cancer patient, and future technology on oncologic diagnosis.

종양핵의학 3 credit

(NUCLEAR MEDICINE FOR ONCOLOGY)

This subject is about radiopharmaceuticals of cancer imaging, parathyroid imaging, gallium and thallium scintigraphy in tumor diagnosis, use of sentinel node imaging in surgical oncology and role of radiolabeled antibodies.

특수방사선치료 3 credit

(RADIATION ONCOLOGY IN SPECIAL DISCIPLINES)

1. To study the rationale, indication, advantage, disadvantage, complication and its prognostic factors in special disciplines of radiation oncology, including hyperthermia, intraoperative radiation therapy (IORT), total body irradiation (TBI) for bone marrow transplantation and intensity modulated radiation therapy (IMRT).

2. To understand the devices which were developed in our department for special treatment and to keep the dignity as the student of Yeungnam University.

특수방사선치료계획 3 credit

(SPECIAL RADIATION TREATMENT PLANNING)

1) Concept of three dimensional radiation treatment planning : ICRU Report 50, 62

2) Treatment planning of stereotactic radiosurgery

3) Treatment planning of TBI

4) Treatment planning of hyperthermia

5) Treatment planning of 3-dimensional conformal radiation therapy

6) Treatment planning of intensity modulated radiation therapy

호흡기방사선종양학 3 credit

(RADIATION ONCOLOGY-LUNG CANCER)

1. To study the smoking, the most important cause of lung cancer and the mechanism of carcinogenesis.

2. To study the characteristics, lymphatic anatomy, pathway of distant metastasis, patterns of failure and prognostic factors of small cell lung cancer and non-small cell lung cancer.

3. To study the advantages and disadvantages of combination therapy including surgery, chemotherapy and radiation therapy in lung cancer treatment.

4. To study radiation damage of normal tissue, the tolerance dose and attempts to improve therapeutic ratio by reducing complications.

**마취통증의학전공**

고혈압환자마취 3 credit

(ANESTHESIA IN THE HYPERTENSIVE PATIENT)

Analysis of the perioperative treatment of hypertensin is important because of the high prevalence of the condition, the great risk in perioperative care, and the high cost of unnecessary delays in surgery.

Etiology, monitoring, and management of hypertensive patients during anesthesia will be discussed.

노인마취 3 credit

(GERIATRIC ANESTHESIA)

Population of old age over 65 years is getting larger and half of these individuals will require surgery. Optimal anesthetic management of these patients will be delivered by understanding of the changes in physiology, anatomy, and response to pharmacologic agents that accompany aging.

동통관리 3 credit

(TREATMENT OF PAIN)

To coordinate multidisciplinary pain management, broad training in dealing with a wide diversity of patients from surgical, obstetric, pediatric, and medical subspecialties, as well as expertise in clinical pharmacology and applied neuroanatomy, including the use of peripheral and central nerve blocks will be treated.

마취간장생리 3 credit

(HEPATIC PHYSIOLOGY FOR ANESTHESIA)

Liver is the largest internal organ and largest gland in the human body. A fundamental knowledge of hepatic anatomy and physiology will be dealed to understand liver disease, its clinical manifestations, and its therapeutic challenges.

마취뇌생리 3 credit

(CEREBRAL PHYSIOLOGY FOR ANESTHESIA)

We'll be able to know the effects of anesthetic drugs and techniques on cerebral physiology, in particular, their effects on cerebral blood flow and metabolism.

마취순환생리 3 credit

(CARDIOVASCULAR PHYSIOLOGY FOR ANESTHESIA)

We'll be able to understand the basic anatomy of the heart that provides two separate circulations; pulmonary and systemic circulation. Physiology of heart as a pump, cellular and molecular biology of the cardiomyocyte, and regulation of cardiac function by neural and humoral factors will be discussed.

마취신장생리 3 credit

(RENAL PHYSIOLOGY FOR ANESTHESIA)

We'll be able to know the function of kidney that regulate intravascular volume, osmolality, acid-base status, electrolyte balance, and excretion and production of drugs.

마취약리 3 credit

(ANESTHETIC PHARMACOLOGY)

Anesthesiologists administer drugs to provide hypnosis, amnseia, analgesia, muscle relaxation, and to support physiologic homeostasis while minimizing side effects and toxicity. We'll be able to know the pharmacokinetic principles, pharmacodynamic principles, and the principles that underlie variability in drug response.

마취호흡생리 3 credit

(RESPIRATORY PHYSIOLOGY FOR ANESTHESIA)

Lung is affected by anesthesia and mechanical ventilation even in healthy patients. In patients with preexisting lung disease, it may cause life-threatening hypoxemia. We'll study the functional impairment that will ensue during anesthesia and mechanical ventilation.

산과마취 3 credit

(OBSTETRIC ANESTHESIA)

Maternal physiology of pregnancy, mechanism, medication, and anesthesia for labor and delivery, complications and management of intrapartum problems will be discussed.

소아마취 3 credit

(PEDIATRIC ANESTHESIA)

Provision of safe anesthesia for pediatric patients depends on a clear understanding of the physiologic and pharmacologic differences between children and adults, especially to preterm infants and congenital malformations. We'll learn how to conduct safe anesthesia in pediatric patients.

쇼크환자마취 3 credit

(ANESTHESIA IN THE SHOCK PATIENT)

Shock denotes circulatory failure leading to inadequate vital organ perfusion and oxygen delivery. We'll classify shocks by mechanisms and clinical classification. Management will be also discussed.

수액요법 3 credit

(INTRAVASCULAR FLUID THERAPY)

Maintenance of a normal intravascular volume is highly desirable in the perioperative period. We'll learn how to assess intravascular volume accurately and to replace any fluid or electrolyte deficits and ongoing losses.

신경외과마취 3 credit

(NEUROSURGICAL ANESTHESIA)

Understanding the effects of anesthesia on the CNS and improvements in anesthetic techniques have contributed to the improved outcomes seen in modern neurosurgery. We'll discuss about the neural physiology, cerebral protection, and various anesthetic method of the neurosurgery.

심폐소생술 3 credit

(CARDIOPULMONARY RESUSCITATION)

Anesthesiologists have played a major role in the development of cardiopulmonary resuscitation techniques. We'll be able to know basic life support (BLS) and advanced cardiac life support (ACLS).

외상환자마취 3 credit

(ANESTHESIA IN THE TRAUMA PATIENT)

Injury is the leading cause of death worldwide in all ages. Patients often have multiple injuries requiring complex positioning, multiple procedures, and the need to consider priorities in management. We'll learn the initial approach to an injured patient, emergency airway management, fluid volume resuscitation, and care of patients with CNS injuries.

저체온마취 3 credit

(HYPOTHERMIC ANESTHESIA)

The two effects of therapeutic hypothermia; benefits and complications will be discussed. We'll be able to manage postanesthetic shivering.

저혈압마취 3 credit

(CONTROLLED HYPOTENSIVE ANESTHESIA)

Hypotensive anesthesia is conducted for reduce bleeding and offer better surgical field. We'll be able to know the effects of induced hypotension in central organs and the drugs used to induce hypotension.

체외순환 3 credit

(EXTRACORPOREAL CIRCULATION)

We'll be able to understand of circulatory physiology, pharmacology, and pathophysiology as well as thorough familiarity with cardiopulmonary bypass, transesophageal echocardiography, myocardial preservation, and surgical techniques.

흡입요법 3 credit

(INHALATION THERAPY)

We'll be able to know indication, equipment, direction, and physiology of inhalation therapy; oxygen, nitric oxide, and other steroid or beta agonist compounds.

**진단검사의학전공**

면역혈액학 3 credit

(LMMUNOHEMATOLOGY)

분자생물학 3 credit

(MOLECULAR BIOLOGY)

One of the newest and most revolutionary areas of laboratory medicine, diagnostic molecular genetics holds promise of becoming the most powerful diagonstic and screening tool of the 21st century. With rapid accerelating pace of discovery of new disease genes under the auspices of the Human Genome Project and recognition the virtually all disease, including genetic, neoplastic and even infectious ones, have some genetic component, the utility of this subspeciality can only continue to expand.

세포유전학 3 credit

(CYTOGENETICS)

Cytogenetics is defined as the science that combined the methods and findings of cytology and genetics to allow the investigation of heredity at the cellular level. This involves careful evaluation of the chromosomes. The ability to detect changes in chromosome structure and directly correlate them to disease and phenotypic anomalies in individuals proved a major advencement in clinical diagnosis.

임상검사정도관리학 3 credit

(QUALITY CONTROL OF LABORATORY TESTS)

임상기생충학 3 credit

(CLINICAL PARASITOLOGY)

임상면역학 3 credit

(CLINICAL IMMUNOLOGY)

임상미생물학 3 credit

(CLINICAL MICROBIOLOGY)

임상생화학 3 credit

(CLINICAL BIOCHEMISTRY)

임상요경검학 3 credit

(CLINICAL URINALYSIS)

A significant amount of information can be obtained through the examination of urine. Careful examination of urine enables the detection of disease processes intrinsic to the urinary system, both physiologic and anatomic. Futhermore, systemic disease processes, such as endocrine or metabolic abnormalities can be detected through the recognition of abnormal amount of disease-specific metabolites excreted in the urine. Clinical laboratory tests of urine will continue to play an essential role in clinical medicine. Each students will study for above mentioned items.

임상종양표적검사학 3 credit

(TUMOR MARKER)

임상지질학 3 credit

(LIPIDOLOGY)

Lipids play an important role in virtually all aspects of biological life, serving as hormones or hormone precursors, aiding in digestion, providing energy storage and metabolic fuels, acting as functional and structural components in biomembranes, and forming insulation to allow nerve conduction or prevent heat loss. The causative relation between plasma lipids and lipoproteins and atherosclerosis was established conclusively in the past decade. Each students will study about characteristics and analysis of each lipids, classification, diagnosis and treatment guide lines of various hyperlipidemia and various risk factors of CHD.

임상진균학 3 credit

(CLINICAL MYCOLOGY)

With increasing use of immunosuppressive protocols for transplants and chemotherapy of neoplastic disease, and fungal isolate must be considered a potential pathogen. So The goal of this lecture is to present the fundamentals of medical mycology, especially culture and diagnisos with an emphasis on practical issues and those fungal pathogens encountered regularly in the laboratory, and some less commonly isolated but potential pathogen.

지혈혈전학 3 credit

(HEMOSTASIS)

Normal hemostasis involves the formation of blood clots to stop bleeding from injured vessels and natural anticoagulant and fibrinolytic systems that limit clot formation to sites of injury, preventing clot formation beyond the site of vessel injury. Defects in clot formation or overactive fibrinolysis can lead to bleeding disorders and defects in the anticoagulant systems or defective fibrinolysis leads to hypercoagulability.

진단혈액학 3 credit

(DIAGNOSTIC HEMATOLOGY)

치료적약물감시학 3 credit

(THERAPEUTIC DRUG MONITORING)

특수생화학 3 credit

(ENZYMOLOGY SPECIAL CHEMISTRY, ENZYMOLOGY)

**재활의학전공**

경직 3 credit

(SPASTICITY)

Spasticity may be seen after lesions of the cerebral cortex, brain stem, or spinal cord. Because hypertonus may compromise voluntary movement and posture, clinicians often attempt to minimize such hypertonus to improve function.

노인환자의재활 3 credit

(REHABILITATION OF GERIATRIC PATIENT)

Geriatric rehabilitation focused on the symptoms and function of aging individuals. There are differences between the healthy and the ill. Geriatric rehabilitation addresses problems that have an impact not only on the individual patient, but also on society at large.

뇌졸중환자의재활 3 credit

(REHABILITATION OF PATIENT WITH STROKE)

A stroke is a clinical syndrome characterized by the sudden development of a persisting focal neurologic deficit. The objectives of stroke rehabilitation are to reduce the impairments through therapy, achieve a maximum level of functional independence, minimize disability, and reestablish a meaningful and gratifying life.

물리의학의원리 3 credit

(PRINCIPLES OF PHYSICAL MEDICINE)

Physical agents such as heat, cold, light, friction, and pressure have been used as therapeutic agents for thousands of years. In this subject, the emphasis is on the clinical use, effectiveness, limitation, and safety of the physical agents. Relevant biophysics and mechanical features of the equipment also will be briefly reviewed.

보조기와의지 3 credit

(ORTHOSIS AND PROSTHESIS)

The physician needs to know prescribing specific orthosis and prosthesis according to indication, anatomy, neuromuscular function, and the biomechanical deficits.

보행분석 3 credit

(GAIT ANALYSIS)

Informal visual analysis of gait is done routinely by clinicians but does not provide quantitative information and is complicated by the gait deviations and compensations present in pathologic gait. Careful, systematic visualization can yield some useful descriptive information, especially if video technology is used.

소아재활 3 credit

(PEDIATRIC REHABILITATION)

The three most common disabling disorders of childhood seen in a comprehensive rehabilitation setting are cerebral palsy, myelodysplasia, and muscular dystrophy. We reviews the scope of disabling disorders that occur in childhood, the specific differences between children and adults that related to their special needs and the basic principles of management of disabled children.

심혈관질환환자의재활 3 credit

(REHABILITATION OF PATIENT WITH CADIOVASCULAR DISEASE)

Cardiac rehabilitation is the process of restoring an individual with a cardiac problem to the maximum level of activity compatible with the functional capacity of his or her heart. Cardiac rehabilitation programs involved patients with coronary artery disease and were begun at the time of their acute MI.

외상성뇌손상환자의재활 3 credit

(REHABILITATION OF PATIENT WITH TRAUMATIC BRAIN INJURY)

The nature of injury sustained in vehicular accidents often results in multifocal lesions and diffuse brain damage with a variety of physical, cognitive, and neurobehavioral impairments. We will know epidemiology, pathophysiology, evaluation methods, and rehabilitation therapy of patients with traumatic brain injury.

요통환자의재활 3 credit

(REHABILITATION OF PATIENT WITH LOW BACK PAIN)

The natural history of low back pain is predictable and nonalterable. However, with the proper application of rehabilitation techniques, prevention of recurrences and long-term disability is possible. The improvement in quality of life and the ultimate financial savings to society warrant a critical appraisal and comprehensive approach to the evaluation and treatment of low back pain.

운동기능의신경생리 3 credit

(NEUROPHYSIOLOGY OF MOTOR FUNCTION)

Some recovery of motor function takes place after a CNS lesion. We will explore the neural mechanisms that are or may be related to such recovery and emphasizes data that are particularly important to an understanding of physiological mechanisms of recovery of function and to the role of rehabilitation in obtaining the maximum possible recovery

재활의학총론 3 credit

(INTRODUCTION OF REHABILITATION MEDICINE)

Rehabilitation is the process of helping a person to reach the fullest physical, psychological, social, vocational, and educational potential consistency with his or her physiologic or anatomic impairment, environmental limitations and life spans. We will know the definition and purposes of rehabilitation medicine.

재활의학특강 3 credit

(ADVANCED TOPICS ON REHABILITATION)

Rehabilitation should be comprehensive and include prevention, early recognition, and outpatient, inpatient, and extended care programs. Anticipated patient outcomes of such a comprehensive and integrated rehabilitation program should include increased independence, a shortened length of stay, and an improved quality of life.

전기진단검사 3 credit

(ELECTRODIAGNOSTIC STUDY)

Performing and electrodiagnostic medicine consultation requires a thorough understanding of nerve and muscle physiology and pathophysiology. Of equal importance is knowing the manner in which the electrodiagnostic instrument processes and displays the various electrical signals generated during the examination.

척수손상환자의재활 3 credit

(REHABILITATION OF PATIENT WITH SPINAL CORD INJURY)

Spinal cord injury(SCI) is a traumatic insult to the spinal cord that can result in alterations of normal motor, sensory, and autonomic function. Optimal management of SCI requires an interdisciplinary team. We will know functional ability through neurologic classification, and complications and their therapy.

폐질환환자의재활 3 credit

(REHABILITATION OF PATIENT WITH PULMONARY DISEASE)

Pulmonary rehabilitation is medical practice wherein an individually tailored, multidisciplinary program is formulated which through accurate diagnosis, therapy, emotional support, and education, stabilizes or reverses both physio- and psychopathology of pulmonary diseases and attempts to return patient to the highest possible functional capacity allowed by pulmonary handicap and overall life situation.

환자평가 3 credit

(EVALUATION PROCESS)

Although the rehabilitation evaluation encompasses all elements of the general medical history and physical examination, its scope is more comprehensive; thus, the rehabilitation evaluation provides unique, comprehensive, and interdisciplinary perspectives.

**응급의학전공**

노인응급의학 3 credit

(GERIATRIC EMERGENCY MEDICINE)

The students should learn and study the next items to understand comprehensively geriatric emergency medicine.

1) The definition and basic concept of geriatric emergency

2) The physiologic changes during aging process

3) The characteristics of geriatric emergency care

4) The design of living space for geriatrics

5) Geriatric trauma care

6) Psychiatric disorders in patients

뇌소생술학 3 credit

(CEREBRAL RESUSCITATION)

The students should learn and study the next items to understand comprehensively the cerebral resuscitation.

1) The need of cerebral resuscitation

2) Acute central nervous system failure

3) The relationship of advanced cardiopulmonary resuscitation and cerebral resuscitation

4) The drugs used in cerebral resuscitation

5) Cerebral resuscitation and rehabilitation

독성응급의학 3 credit

(TOXICOLOGIC EMERGENCY)

The students should learn and study the next items to understand comprehensively the toxicologic emergency that is a field of managing acute exposure of toxic material.

1) The definition and basic concept of toxicology

2) The classification of toxic material

3) The characteristics and antidote of toxic material

4) Occupational exposure of toxic material

5) The emergency care of intoxicated patients

소생의학총론 3 credit

(GENERAL CONCEPTS OF RESUSCITATIVE MEDICINE)

The main target of this study has become heart and brains too food to die. The students should learn and study the next items to understand the resuscitative medicine cimprehensively.

1) The concepts of resuscitative medicine

2) The development of resuscitative medicine

3) The mechanism and pathophysiogy of dying and shock

4) Brain death organ retrieval

5) Cardiovascular system failure and sudden death

소아응급의학 3 credit

(PEDIATRIC EMERGENCY MEDICINE)

The students should learn and study the next items to understand comprehensively the pediatric emergency medicine.

1) The difinition and basic concept of pediatric emergency

2) The physiologic and anatomical characteristics of neonate and pediatrics

3) The equipments used in neonatal and pediatrics

4) The drugs used in neonatal and pediatrics

5) The treatment algorithm in neonatal and pediatric advanced life support

응급산부인과학 3 credit

(OBSTETRIC & GYNECOLOGIC EMERGENCY MEDICINE)

The students should learn and study the next items to understand comprehensively the obstetric and gynecoogic emergency medicine.

1) The definition and basic concept of gynecologic emergency

2) The physiologic changes and characteristics of pregnant women

3) The trauma care in pregnant women

4) The emergency care of medical disorder in pregnant women

5) The characteristics of advanced life wupport in pregnant women

6) Emergency delivery

응급신경학 3 credit

(NEUROLOGIC EMERGENCY MEDICINE)

The students should learn and study the next items to understand comprehensively the neurologic emergency medicine.

1) The general concept of neurologic emergency medicine

2) Emergency management of neurologic patients

3) Emergency assessment and management of the stroke patients

4) Emergency assessment and management of the spinal cord syndrome

5) The mechanism of increased intracrenial pressure and its emergency management

6) Emergency management of neuroliptic malignant syndrome

응급영상학 3 credit

(EMERGENCY RADIOLOGY)

The students should learn and study the next items to understand comprehensively the emergency radiology that is a field of testing and interventioning by various radiologic equipments on urgent patients.

1) The definition and basic concept of emergency radiology

2) The differences of emergency and elective radiologic test

3) Diagnostic emerency radiology

4) Interventional emergency radiology

5) The radiologic test by emergency physician

응급의료센타(실)관리학 3 credit

(EMERGENCY DEPARTMENT MANAGEMENT)

The students should learn and study the next items to understand comprehensively emergency department management.

1) The definition and basic concept of Emergency department(ED) management

2) The characteristics of the work environment in ED

3) The role of the ED director

4) Continuous quality improvement of ED

5) The effective operation of facilities, equipments and personnel belonged to ED

응급의료와법률 3 credit

(LEGAL ASPECTS OF EMERGENCY MEDICINE)

The students should learn and study the next items to understand comprehensively the legal aspects of emergency medicine.

1) The development of emergency medical law

2) The medical malpractice in emergency medicine

3) The risk management in ED

4) The role of ED director for preventing malpractice litigation

5) The medicolegal issues and current trend

응급의료체계 3 credit

(EMSS (EMERGENCY MEDICAL SERVICE SYSTEM))

The students should learn and study the next items to understand comprehensively EMSS that should be able to perform life-saving emerfency care to acute ill, injured and disaster victims effectively

1) The definition and concept of EMSS

2) The types and characteristics of EMSS

3) The essential elements of EMSS cinstruction

4) The role of EMSS in nation and regional area

5) The effective operation of EMSS

6) The role of emergency physician in EMSS

응급의학총론 3 credit

(GENERAL CONCEPTS OF EMERGENCY MEDICINE)

The students should learn and study the next items to understand the emergency medicine comprehensively.

1) The general concept of Emergency Medicine(EM)

2) The characteristics of emergency patient and care

3) The background and need of EM foundation

4) The role of EM in regional area

5) The role of EM in hospital

6) The special field of EM

응급정신과학 3 credit

(PSYCHIATRIC EMERGENCY MEDICINE)

The students should learn and study the next items to understand comprehensively the psychiatric emergency medicine.

1) Overview of common psychiatric emergency

2) Assessment of psychiatric and behavioral emergency

3) Management of psychiatric and behavioral emergency

4) Psychiatric emergency in pediatrics

5) Psychiatric emergency in adults

6) Family and child abuse

재해의학 3 credit

(DISASTER MEDICINE)

The students should learn and study the next items to understand comprehensively disaster medicine and confront effectively disaster medicine and confront effectively the disaster

1) The basic concepts of disaster medicine

2) classification of disaster

3) Disaster planing and drilling

4) Triage and management of mass casualties

5) Evacuation and transport of casualties from the scene

6) The role of emergency physician in disaster

전문심장소생술학 3 credit

(ADVANCED CARDIAC LIFE SUPPORT)

The students should learn and study the next items to understand comprehensively the ACLS.

1) The development of advanced cardiac life support(ACLS)

2) The theoretical background of ACLS

3) The equipments used in ACLS

4) The drugs used in ACLS

5) The algorithms in ACLS

6) The interpretation of ECG

전문외상소생술학 3 credit

(ADVANCED TRAUMA LIFE SUPPORT)

The students should learn and study the next items to understand comprehensively the ATLS.

1) The development of advanced trauma life support(ATLS)

2) The Mechanism and classification of trauma

3) The equipments used in ATLS

4) The drugs and fluid used in ATLS

5) The prevention of Trauma

항공응급의학 3 credit

(AERO-EMERGENCY MEDICINE)

The students should learn and study the next items to understand comprehensively the aero-emergency medicine.

1) The definition and basic concept of aero-emergency medicine

2) The physiologic changes in the aircraft

3) Air transport of acute ill or injured patients

4) Emergency care in the aircraft

5) The composition and training program of air-emergency care team

환경응급의학 3 credit

(ENVIRONMENTAL EMERGENCY MEDICINE)

The students should learn and study the next items to understand comprehensively the environmental emergency medicine that is a field of caring outdoor emergency situations

1) The definition and basic concept of environmental medicine

2) Emergency care of high and low pressure injury

3) Emergency care of heat and hypothermic injury

4) Emergency care of bite and sting injury

5) Emergency care of near-drowning and drowning

6) Emergency care pf lightning and electrical injury

**가정의학전공**

가족의구조와기능 3 credit

(FAMILY STRUCTURE AND FUNCTIONING)

We will be able to understand family as a psychosocial basic unit and will study definition and types of family, structure and function of family, framing of family genogram, evaluational tools of family function evaluational models of family function and family dynamic also

가족중심진료 3 credit

(FAMILY-CENTERED HEALTH CARE)

We will study importance of family in treating patients and will learn about counselling and treatment methods toward family.

We will learn notion and need of family-oriented health care and development stage of family-oriented health care and importance of treat family together in medical treatment, the problems that the family physician handle with family medicine's unique approach method and the principles of solution-centered short family treatment.

남성갱년기 3 credit

(ANDROPAUSE)

We'll be able to know physical, behavioral, psychological change in men who are forty year's old or more, and search symptoms that follow to andorgen decrease and treatment of them.

노인에서의약물치료 3 credit

(DRUG TREATMENT IN AGED PERSON)

The effect of drug medication to a individual is the result of many complex process. We'll be able to study the pharmacokinetics and pharmacodynamics of old person following to ageing and study complex of pharmacokinetics , pharmacodynamics and drug treatment in aged person.

노인의일반적의학관리 3 credit

(CLINICAL MANAGEMENT GENERAL MEDICAL CARE IN AGED PERSON)

We'll be able to understand clinical difference between the geriatric patient and the young patient. We'll be investigate the behavior pattern of seak aged person, possibility of numerous diseases and change of symptom associated with them.

노화와노인병 3 credit

(AGING AND GERIATRICS)

We'll be able to understand aging process and charater of geriatric disease. We'll be able to investigate cautions about interpretating laboratory exam, charater of managing geriatric patient, and technique for medical examination of geriatric patient.

보완의학 3 credit

(COMPLIMENTARY AND ALTERNATIVE MEDICINE)

We'll be able to learn about the kinds, the management status, the clinical implication and the problems of the complimentary and alternative medicine in various disease.

비만과에너지대사 3 credit

(OBESITY AND ENERGY METABOLISM)

Disequilibrium of energy intake and consumption makes obesity. We'll be able to make sense of human metabolic regulation what maintain body weight and understand the change of energy metabolism that appears in obese people.

비만과운동 3 credit

(OBESITY AND EXERCISE)

We'll be able to know efficacy of exercise that affect body and metabolic regulation that be influenced by the types and intensity of exercise. We'll also be able to know carbohydrate and lipid metabolism when one exercise persistently, and especially, will be able to search exercise management for obese patients.

삶의질 3 credit

(QUALITY OF LIFE)

We will be able to define health, functioning and quality of life. We will be able to explain clinical use for evaluating in health condition, to explain the important contents to get a valuable functional health condition evaluating methods and how to use this rightly.

스트레스 3 credit

(STRESS)

We will be able to know a notion of stress, human physiologic changes toward stress, disease and health problems related with stress, how to measure, evaluate and manage stress.

여행자건강관리 3 credit

(HEALTH FOR INTERNATIONAL TRAVELER)

We will be able to understand medical preparations before domestic or international travel, such as medical problem according to travel, preventive injection and evaluation before travel.

의사소통과면담 3 credit

(COMMUNICATION AND CLINICAL INTERVIEW SKILLS)

We will be able to apply communication and clinical interview skills in practice. We will be able to learn need of clinical interview skills, clue to learn in clinical interview, active hearing method in communication, a kind of non-verbal communication, a step of medical interview. We will learn about effective interview skills in patients who have problems in communication.

임상건강증진학 3 credit

(CLINICAL HEALTH PROMOTION)

임상문제의접근방법 3 credit

(MEDICAL PROBLEM SOLVING)

We will be able to understand character of Family medicine and problem solving methods in practical clinical treatment.

We will learn about searching patient's problem solving process, a kind of clues in problem solving process, an available factors in establishing hypothesis, external factors affecting in clinical decision, special points of family medicine in problem solving process.

임상비만학 3 credit

(CLINICAL OBESITY)

Nowadays, obese population is increasing. It turned into a grave international issue that the cost, which of treatment for obesity and its complication, is increased. Obesity comes to be the main cause of metabolic syndrome that include insulin resistance, hyperlipidemia, and hypertension. We'll be able to know practical plan what prevent and management obesity.

지역사회기반장기치료 3 credit

(COMMUNITY-BASED LONG-TERM CARE)

The community-based long-term care is not a medical care for most healthy old person, it is a medical care about tender, chronic ill, old person. Though there is no definite distinction about medical care and social demand in caring old person, community and health care system must develop methods that satisfy the patient demand and also that are cost-effective.

지역사회와일차의료 3 credit

(COMMUNITY-ORIENTED PRIMARY CARE)

We will be able to understand definition, factor, function and need of primary care, and we will know about the family physician's role in primary care and korean primary care's problem and improvement.

We will be able to understand notion of community-oriented primary care and these concrete operation method.

질병예방과건강증진 3 credit

(DISEASE PREVENTION AND HEALTH PROMOTION)

We will know the difference between typical medical treatment and clinical preventive medicine. We will know the mean and effect of disease prevention and health promotion between health and disease, chief contents of disease prevention and health promotion. we will be able to learn an obstacle factor in clinical adaptation of disease prevention and health promotion and these is avaliable in treatment.

평생건강관리 3 credit

(LIFELONG HEALTH MONITORING PROGRAM)

We will be able to know the background, notion, chief contents, character of lifelong health monitoring program, regular screening tests and contents of Korean lifelong health monitoring program. We will learn about a prospective program of lifelong health monitoring program.

포괄적노인평가 3 credit

(COMPREHENSIVE EVALUATION OF AGED PERSON)

We'll be able to learn comprehensive evaluation of aged person that used making comprehensive plan for prevention, treatment and rehabilitation of aged person's disease, and learn the bases of efficacy and the way of comprehensive evaluation about aged person.

환자교육 3 credit

(PATIENT EDUCATION)

We will be able to know need of patient education and apply it in the clinical practice, and a notion of the patient compliance, factors affecting compliance, evaluating methods of compliance.

**치과학전공**

교합생리학 3 credit

(PHYSIOLOGY OF OCCLUSION)

This subjects deals with an occlusion in harmony with functions of the masticatory system between the stresses and adaptive capacity of the supporting tissues.

구강내과학 3 credit

(ORAL MEDICINE)

This course gives students a foundation for understanding oral conditions which directly affect the oral and Para-oral structures as well as common medical disorders and how to alter dental treatment in patients with common complex medical conditions.

구강병리학 3 credit

(ORAL PATHOLOGY)

The aims of oral pathology are to study the types of diseases which develop in the tooth structure, pulpal tissue, jaw bones, oral mucosa, tongue, palate, salivary gland, and perioral musculoskeletal system with histo-pathologic method.

구강악안면감염학 3 credit

(ORAL AND MAXILLOFACIAL INFECTION)

The aims of this subject are to distinquish origin between odontogenic and non-odontogenic infection, and classify the origin and process, so that study methods and sequence of treatment to apply for the diagnosis and treatment of oro-facial infectious disease.

구강악안면기형학 3 credit

(ORAL & MAXILLOFACIAL DEFORMITIES)

This subjects deals with irregularities or malformations in the bones and/or soft tissues of the jaws and lower part of the face. They can arise from congenital conditions such as cleft lip and palate, or can be the immediate or long term outcome of a trauma such as a car accident, or a disease such as cancer. More routinely, maxillofacial deformities are very often growth related. Uneven growth of the upper and lower jaws can lead to either or both jaws being over or underdeveloped. This can disturb their normal alignment.

구강악안면외상학 3 credit

(ORAL AND MAXILLOFACIAL TRAUMATOLOGY)

This subjects deals with any physical trauma to the face. Facial trauma can involve soft tissue injuries such as burns, lacerations and bruises, or fractures of the facial bones such as nasal fractures and fractures of the jaw, as well as trauma such as eye injuries.

구강학안면재건학 3 credit

(ORAL & MAXILLOFACIAL RECONSTRUCTION)

This subjects deals with surgical technique to recover maxillofacial defects resulting from trauma, tumor resection and/or teeth extractions.

구강악안면종양학 3 credit

(ORAL & MAXILLOFACIAL ONCOLOGY)

This subjects deals with cancer that occurred at oral and maxillofacial region. this subject is concerned with diagnosis, therapy, palliative care and follow-up of cancer patients after treatment.

구강임플란트외과학 3 credit

(DENTAL IMPLANTOLOGY)

This subjects deals with surgical techniques aiming at the functional rehabilitation of a patient affected by total or partial edentulism, by using dental implants, i.e. metal elements surgically inserted in the mandibular or maxillary bone, or above them but under the gum.

구강해부조직학 3 credit

(ORAL ANATOMY AND HISTOLOGY)

This subjects deals with the development of tooth and oral cavity, names of major anatomic structures, and understandings of growth and development of jaw bone mechanism so being acquainted with a relationships of clinical dentistry.

악관절생리학 3 credit

(TMJ PHYSIOLOGY)

The aims of the subject are to understand the anatomy/physiology of the temporomandibular joint (TMJ) and relate it to evaluation and treatment.

악교정외과학 3 credit

(SURGICAL ORTHODONTICS)

This subject deals with orthognathic surgery, is a type of orthodontic treatment used to correct severe cases that include bad bites, jaw bone abnormalities, and malocclusion.

악기능교정학 3 credit

(DENTAL ORTHOPEDIC-ORTHODONTICS)

This subject deals with field of dentistry that revolved around the treatment and study of improper bites (malocclusions), tooth irregularity and occlusion or disproportionate jaw improved bite. Orthopedics is the study of the human musculoskeletal system.

치과교정학 3 credit

(DENTAL ORTHODONTICS)

This subject deals with the understanding of normal occlusion and malocclusion, principles of tooth arrangement, growth and development of maxillofacial bone and orthopedic correction, so that is usefully early diagnosis of the musculo-skeletal abnormality and study of systemic balanced development.

치과 및 악안면방사선학 3 credit

(ORAL & MAXILLOFACIAL RADIOLOGY)

This subject deals with specialty of Dentistry concerned with performance and interpretation of diagnostic imaging used for examining the craniofacial, dental and adjacent structures.

치과보존 및 근관치료학 3 credit

(DENTAL CONSERVATIVE AND ENDODONTICS)

The aims of the subject are to understand the etiology of tooth hard tissue disease, process of pulpitis and principle of endodontic treatment, to cooperate with preventive treatment of tooth preservation and differentiate between toothache and facial non-specific pain.

치과보철학 3 credit

(DENTAL PROSTHODONTICS)

This subject deals with dental specialty responsible for the diagnosis, treatment planning, rehabilitation and maintenance of patients with complex clinical conditions using biocompatible substitutes, including implants, to restore missing or deficient teeth and/or craniofacial tissues in esthetics and function. Prosthodontics can be divided into two major categories by its function and forms, which is fixed and removable prosthodontics.

치주병학 3 credit

(PERIODONTOLOGY)

The aims of the subject are to exlain occurrence of gum disease, process of gingivitis and periodontitis, immunologic reaction and study the relationships with systemic disease, so that is concerned with removal of locas factor and study of treatment prenciple of oral hygienic management.

**핵의학전공**

근골격계핵의학 3 credit

(NUCLEAR MEDICINE IN DISORDERS OF BONES AND JOINTS)

This subject is about overview of bony physiology, the procedure and interpretation of bone scintigraphy, evaluation of primary bone tumors and metastastic bone disease, assessment of infection, trauma and arthritis.

내분비계핵의학 3 credit

(NUCLEAR MEDICINE IN ENDOCRINOLOLGY)

This subject is about a production, excretion, transport and metabolism of thyroid hormone, thyroid physiologic examination, in vitro test for thyroid hormone, thyroid scan, parathyroid scan and adrenal gland scan.

방사면역측정학 3 credit

(RADIOIMMUNOASSAY)

This subject is about the kinds and principles of radioimmunoassay, composition elements as like radiotracer, analysis methods, quality control by error and precision evaluation and clinical use.

방사선생물학 3 credit

(RADIATION BIOLOGY)

This subject is about effects of radiation on cells, direct and indirect action of radiation, cell survival vurves, factors affecting cell response to radiation, short-term effects of total body irradiation and long-term effects of radiation.

방사성의약품치료 3 credit

(RADIONUCLIDE THERAPY)

This subject is about overview of radionuclide therapy, the treatment of thyrotoxicosis and thyroid cancer, I-131 MIBG treatment for malignancy, the palliation treatment of metastatic bone pain and radioimmunotherapy.

사이클로트론방사화학 3 credit

(CYCLOTRON RADIOCHEMISTRY)

This subject is about radioisotope producted by cyclotron, cyclotron structure and priciples, radiopharmacheuticals labelled with O-15, N-13, C-11, F-18, and quality control of radiotracers.

신경핵의학 3 credit

(NUCLEAR NEUROLOGY)

This subject is to know the kinds and differences of radiophar-macheuticals, to select an adequate nuclear medicine procedure to diagnosis of neurologic diseases and to interpret the findings of results by cisternography and brain single photon emission tomography.

신장핵의학 3 credit

(NUCLEAR MEDICINE IN RENAL DISORDERS)

This subject is about overview of renal nuclear medicine, radiopharmacheuticals, quantitative evaluation of clearance, diuretic renal scan and captopril renal scan for diagnosis of renovascular hypertension.

심장양전자방출단층촬영술 3 credit

(CARDIAC POSITRON EMISSION TOMOGRAPHY(PET))

This subject is about the characteristics of myocardial perfusion radiopharmacheuticals and myocardial metabolic radiopharmacheuticals, methods, clinical use for coronary artery disease and myocardial viability.

심장핵의학 3 credit

(NUCLEAR CARDIOLOGY)

This subject is about radiopharmacheuricals, methods, results in cardiac disease and interpretaion of imaging in radionuclide angiography, gated cardiac blood pool scintigraphy, myocardial perfusion scintigraphy

양전자방출단층촬영술 3 credit

(POSITRON EMISSION TOMOGRAPHY)

This subject is about the characteristics of myocardial perfusion radiopharmacheuticals and myocardial metabolic radiopharmacheuticals, methods, clinical use for coronary artery disease and myocardial viability.

종양PET/CT 3 credit

(ONCOLOGY PET/CT)

This subject is about the differences between PET and PET/CT, advantages and disadvantages of PET/CT, clinical indication of PET/CT in variable malignancy, interpretation of PET/CT and quantitative evaluation.

종양핵의학 3 credit

(NUCLEAR MEDICINE FOR ONCOLOGY)

This subject is about radiopharmaceuticals of cancer imaging, parathryoid imaging, gallium and thallium scintigraphy in tumor diagnosis, use of sentinel node imaging in surgical oncology and role of radiolabeled antibodies.

핵물리학 3 credit

(NUCLEAR PHYSICS)

This subject is about atomic physic, radioactive decay, interaction of radiation with matter, scintillation detectors to understand the clinical nuclear medicine for imaging and treatment.

핵의학기기 3 credit

(NUCLEAR INSTRUMENT)

This subject is about principles of operation and structure of gamma cameras, single photon emission tomography, positron emission tomography and scintillation.

호흡기계핵의학 3 credit

(NUCLEAR MEDICINE IN PULMONOLOGY)

This subject is about overview of pulmonary anatomy and physiology, radiopharmacheuticals and quantitative method of ventilation and perfusion lung scan, and the diagnostic criteria of pulmonary embolism.

**의과학전공**

간장의과학 3 credit

(HEPATOLOGY)

감염의과학 3 credit

(INFECTIOUS DISEASE)

관절의생체역학의과학 3 credit

(BIOMECHANICS OF JOINT)

This course is designed to learn the basic structures, functions, and biomechanics of the various joints.

구강병리의과학 3 credit

(ORAL PATHOLOGY)

The aims of oral pathology are to study the types of diseases which develop in the tooth structure, pulpal tissue, jaw bones, oral mucosa, tongue, palate, salivary gland, and perioral musculoskeletal system with histo-pathologic method.

뇌혈관질환의과학 3 credit

(CEREBROVASCULAR DISEASE)

The student should be able to

1. Describe the pathophysiology of intracerebral hemorrhage (ICH), subarachnoid hemorrhage (SAH) and intra/extracranial stenotic lesions.

2. Describe the typical clinical course of patients with SAH and related complications such as hydrocephalus, vasospasm, stroke, etc;

대장항문외과의과학 3 credit

(COLORECTAL SURGERY)

Recently, the population of colorectal maignancy increased more than any other malignancies because of developed environment in korea. Surgery is main stem in treament. Further, highly sophisticated surgical technique and adjuvant therapy increased cure rate. However, the general outcomes of the treatment is not changed dramatically. On this subject we are looking forward to discuss about new achievements and treatment modality of colorectal cancel

동통관리의과학 3 credit

(TREATMENT FOR PAIN)

To coordinate multidisciplinary pain management, broad training in dealing with a wide diversity of patients from surgical, obstetric, pediatric, and medical subspecialties, as well as expertise in clinical pharmacology and applied neuroanatomy, including the use of peripheral and central nerve blocks will be treated.

바이오신약의외래성미생물검사의과학 3 credit

(ADVENTITIOUS AGENTS TEST FOR BIO-PHARMACEUTICALS)

Recently, novel concept-based bio-pharmaceuticals, such as recombinant protein therapeutics, gene therapeutics, cellular therapeutics have developed along with the progress of bio-engineering technique. These bio-pharmaceuticals are manufactured by using cells originated from various species and free from the contamination of microorganism is a big issue for the safety of drug. Therefore, appropriate tests are required for the approval of new bio-pharmaceuticals. This subject deal with not only the concept of bio-pharmaceuticals, types of adventitious virus and tests for those viruses but also the guideline for the regulation of adventitious virus in US, EU and Korea.

방사선생물의과학 3 credit

(RADIATION BIOLOGY)

This subject is about effects of radiation on cells, direct and indirect action of radiation, cell survival curves, factors affecting cell response to radiation, short-term effects of total body irradiation, and long-term effects of radiation.

방사성약품치료의과학 3 credit

(RADIONUCLIDE THERAPY)

부정맥의과학 3 credit

(CARDIAC ARRHYTHMIA)

분자의과학 3 credit

(MOLECULAR MEDICINE)

This course covers the molecular bases of disease and the methodological and experimental approaches upon which they are based. Topics include the techniques and logic used to address the molecular bases of cardiovascular disease, diabetes, cancer, neurological disease, immunological disease, or any other. Lectures cover broad topic areas in molecular medicine and class discussions focus on representative papers recently published in the field.

비뇨생식기해부및생리의과학 3 credit

(ANATOMY AND PHYSIOLOGY OF THE GENITOURINARY SYSTEM)

The aim of this course is to understand anatomy and physiology of the genitourianry tract system, such as kidney, ureter, bladder, prostate, testis and urethra.

In this course, lectures, detailed laboratory dissections, and prosections will provide a thorough exploration of the gross structure and functions of genitourinary system.

사구체신장염의과학 3 credit

(GLOMERULOPATHY)

상기도질병학 3 credit

(DISEASE OF UPPER RESPIRATORY TRACT)

The intention of this subject is to present in disease of upper respiratory tract such as acute upper respiratory obstruction, tracheobronchial spasm, laryngeal spasm, laryngotracheal stenosis, and tumor. These subject deal with etioloy, pathophysiology, diagnostic approach, and treatment of allergic rhinitis.

생체조절기전의과학 3 credit

(REGULATORY AND INERGRATIVE MECHANISM)

This is an integrated course covering the mechanisms for hormonal and neural regulation of functions of all human organ system.

성형외과와조직공학의과학 3 credit

(PLASTIC SURGERY AND TISSUE ENGINEERING)

This subject covers tissue engineering for plastic surgery. Students learn definition of tissue engineering, regenerative medicine, components of tissue engineering, various biomaterials, vascularization medel of tissue engineering, testing and characterization of tissue engineering approaches, and clinical application.

소아혈액의과학 3 credit

(PEDIATRIC HEMATOLOGY)

This division is focused on the understanding of the basic principles of the etiology, pathogenesis, cilnical presentation and general management of hematologic diseases in childhood. And also this division provides an understanding of normal erythropoiesis and pathophysiologic mechanisms underlying anemias, hemorragic disorders and the interpretation of common hematologic and hemostatic laboratory data, indications and risks of blood component therapy.

소화기학의과학 3 credit

(GASTROENTEROLOGY)

쇼크의과학 3 credit

(SHOCK)

신경병리의과학 3 credit

(NEUROPATHOLOGY)

The disorders of the central nervous system are composed of vascular diseases, tumors, neurodegenerative deseases and others. Among them, CNS tumors are classified wihe various methods, and those are changing continuously. Recently the research methodology depends on molecular biology particularly. The results on the pathogenesis of both neurodegenerative diseases and brain tumors are getting increased more and more. In this neuropathology, it would be emphasized on molecular biology results of brain tumors and degenerative deseases, and then on the relationship between molecular results and patient's prognosis

실험약리학의과학 3 credit

(EXPERIMENTAL PHARMACOLOGY)

The students understand the principles of operations of experimental instruments for the biochemical experiments and the instruments for the experiments with isolated organs or tissues. They also understand the physiological characteristics of various experimental animals, and establish the basic knowledge for the feeding and breeding of the animals. The methodology of design and execution of experiments and the statistical evaluation of data are considered.

심전도의과학 3 credit

(ELECTROCARDIOGRAPHY)

안생리의과학 3 credit

(OCULAR PHYSIOLOGY)

This course covers updated knowledge to enhance the understanding of ocular function. It will also cover the latest molecular, genetic, and biochemical discoveries and offers the unparalleled knowledge and insight into the physiology of the eye and its structures. A new organization by function, rather than anatomy, helps the postgraduates make a stronger connection between physiological principles and clinical practice.

역학개론의과학 3 credit

(PRINCIPLES OF EPIDEMIOLOGY)

염증의병리의과학 3 credit

(PATHOLOGY OF INFLAMMATION)

This session deals with mechanism of inflammation, morphologic patterns and outcomes of acute and chronic inflammation, mediators of inflammation, systemic effect of inflammation and pathologic conditions resulting from defective or excessive inflammation.

임상건강증진의과학 3 credit

(CLINICAL HEALTH PROMOTION)

임상내분비의과학 3 credit

(CLINICAL ENDOCRINOLOGY)

장기이식의과학 3 credit

(ORGAN TRANSPLANTATION)

재활의과학총론 3 credit

(INTRODUCTION OF REHABILITATION MEDICINE)

Rehabilitation is the process of helping a person to reach the fullest physical, psychological, social, vocational, and educational potential consistency with his or her physiologic or anatomic impairment, environmental limitations and life spans. We will know the definition and purposes of rehabilitation medicine.

정신생물학적연구법의과학 3 credit

(RESEARCH METHOD OF PSYCHO-BIOLOGY)

The branch of biology dealing with the relations or interactions between body and behavior, esp. as exhibited in the nervous system, receptors, effectors, or the like. The school of psychology that interprets personality, behavior, and mental illness in terms of responses to interrelated biological, social, cultural, and environmental factors.

진단혈액의과학 3 credit

(DIAGNOSTIC HEMATOLOGY)

피부과의과학총론 3 credit

(INTRODUCTION OF DERMATOLOGY)

호흡기의과학개론 3 credit

(STUDIES ON GENERAL PULMONOLOGY)